

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

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WASHINGTON, D. C.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1922.

No. 334.

ARTHUR W. IDE, CHARLES GRANT CALDWELL, H. B.
LOOMIS, ET AL., APPELLANTS,

vs.

THE UNITED STATES OF AMERICA.

APPEAL FROM THE UNITED STATES CIRCUIT COURT OF APPEALS
FOR THE EIGHTH CIRCUIT.

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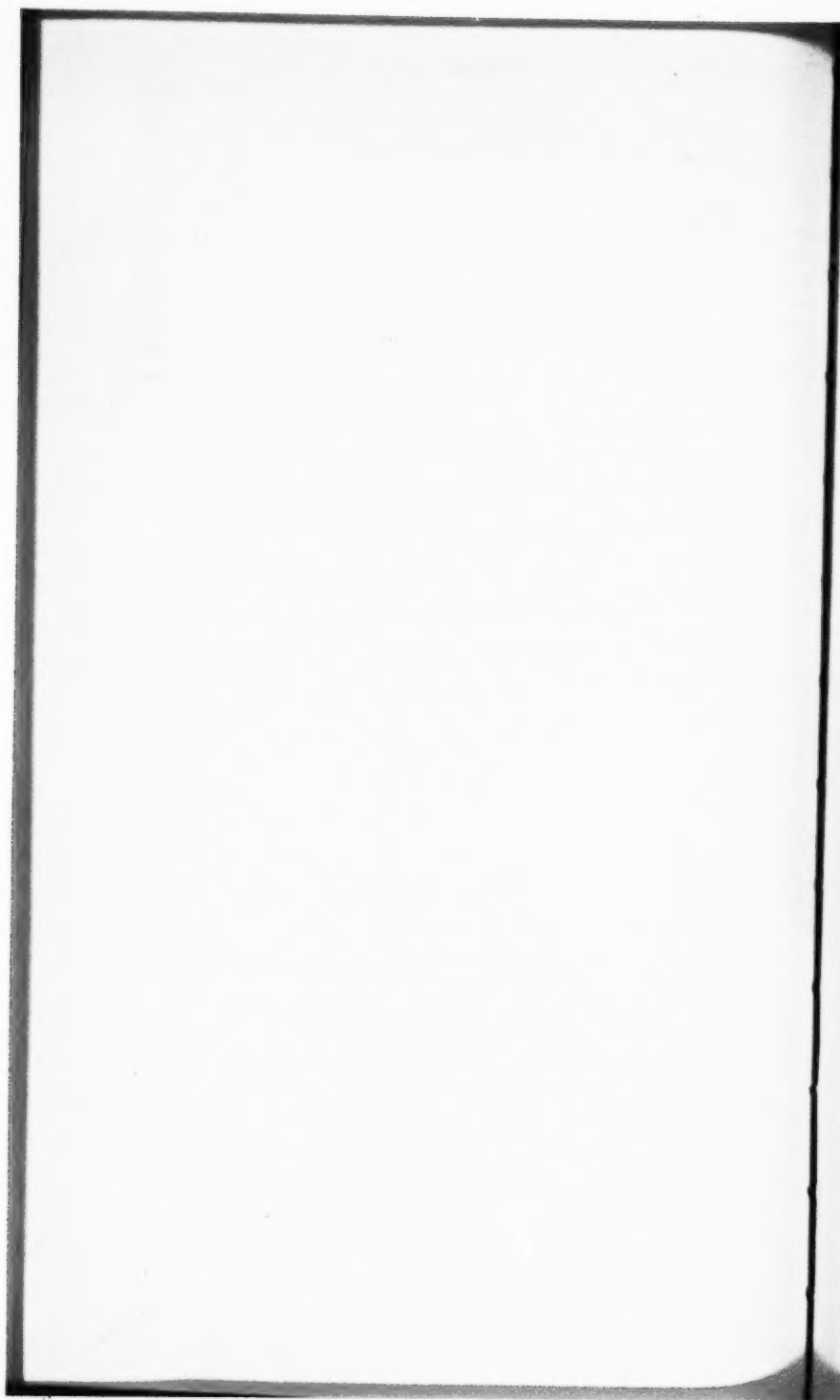
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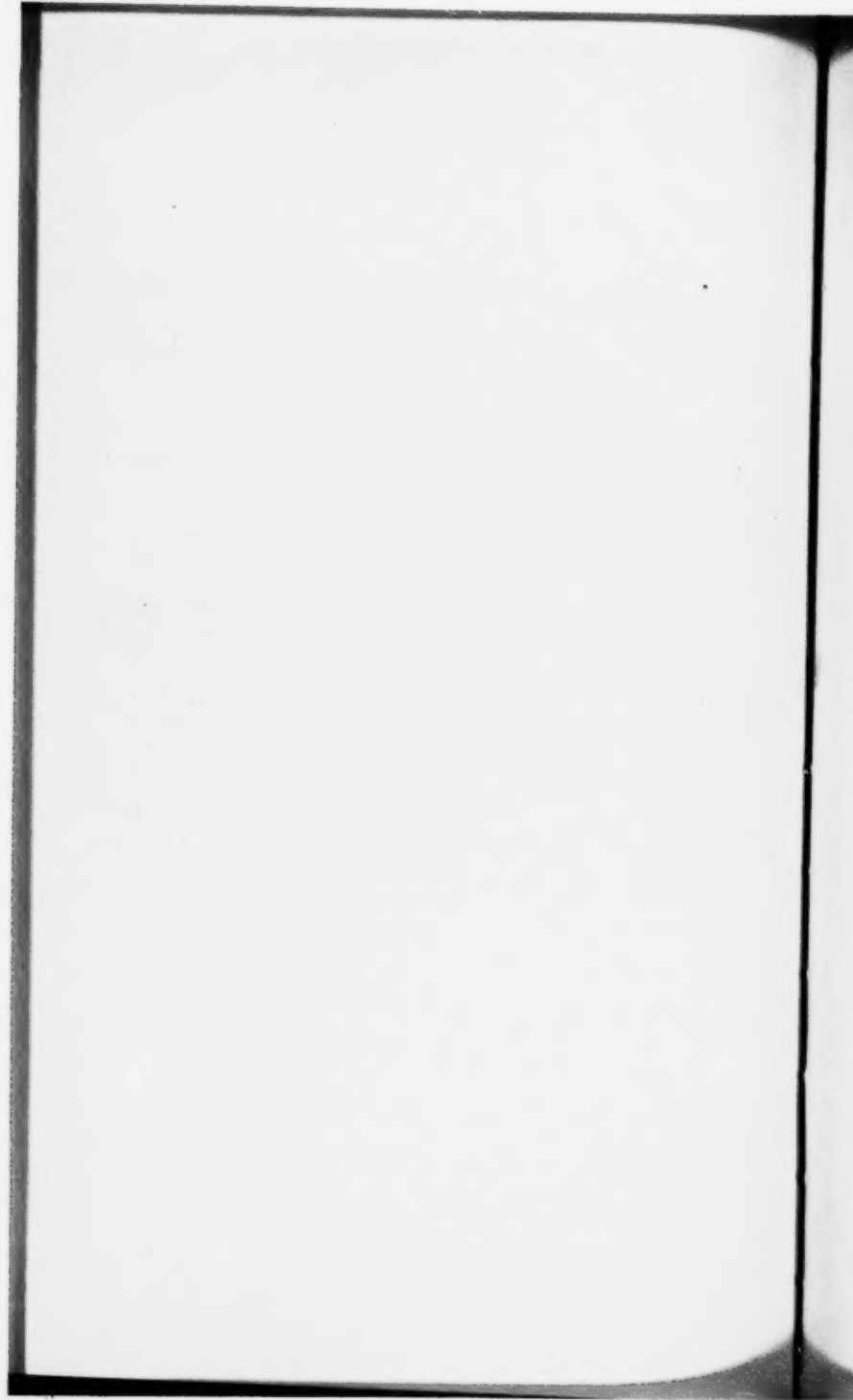
Pleas and Proceedings in the United States Circuit Court of Appeals for the Eighth Circuit, at the December Term, 1921, of said Court, before the Honorable John E. Carland, Circuit Judge, and the Honorable Frank A. Youmans and the Honorable Tillman D. Johnson, District Judges.

Attest:

[Seal of the United States Circuit Court of Appeals, Eighth Circuit.]

E. E. KOCH,
*Clerk of the United States Circuit Court
of Appeals for the Eighth Circuit.*

Be it Remembered that heretofore, to wit: on the seventh day of September, A. D. 1920, a transcript of record pursuant to an appeal allowed by the District Court of the United States for the District of Wyoming, was filed in the office of the Clerk of the United States Circuit Court of Appeals for the Eighth Circuit in a certain cause wherein the United States of America was Appellant and Arthur W. Ide, et al., were Appellees, which said transcript as prepared and printed, in pursuance of the stipulation of the parties for the use of the Court upon the hearing of said cause, under the rules of the United States Circuit Court of Appeals for the Eighth Circuit, under the supervision of its Clerk, is in the words and figures following, to wit:



1 Pleas in the District Court of the United States
 for the District of Wyoming, Sitting
 at Cheyenne.

Be It Remembered, that heretofore, and on, to-wit, the third day of July, in the year of Our Lord, one thousand nine hundred and eighteen, came the United States of America by Charles L. Rigdon, Esquire, United States Attorney, its solicitor, and filed in said court its Bill of [Company], and sued out of and under the seal of said court, a Subpoena in Chancery against Arthur W. Ide; Charles Grant Caldwell and H. B. Loomis.

And said Bill of Complaint is in words and figures following, to-wit:

2 Bill of Complaint.

 In the District Court of the United States
 for the District of Wyoming.

United States of America,

Plaintiff,

vs.

Arthur W. Ide, Charles Grant Caldwell
and H. B. Loomis,

Defendants.

} No. 984 Civil.

The United States of America, acting under the authority of the Attorney General of the United States, brings this its bill of complaint, and alleges:

I.

That the said Arthur W. Ide, Charles Grant Caldwell and H. B. Loomis are citizens and residents of the State of Wyoming.

II.

That the plaintiff has heretofore, in pursuance of the provisions of the Act of Congress of June 17, 1902, and acts amendatory thereof, constructed, and so far as the same has been constructed, is now operating and maintaining an irri-

gation system located in the Counties of Park and Big Horn, in the State of Wyoming, known as the Shoshone Irrigation Project, and in connection with the construction and development and operation of said Project has withdrawn from entry, under said Act and the Act of August 30, 1890, extensive areas of land in Park and Big Horn Counties aforesaid, including land in Townships Fifty-five (55) and Fifty-six (56) North, of Range Ninety-nine (99) West, and in Townships Fifty-five (55) and Fifty-six (56) North, of Range Ninety-eight (98) West of the Sixth Principal Meridian; that in pursuance of the provisions of said Acts and under the rules and regulations of the Secretary of the Interior provided in said Acts, plaintiff has constructed drainage ditches for the purpose of reclaiming large areas of water logged and seepage lands, with the purpose of diverting said drainage water to the canals of said system to be used upon other lands in the regular course of the reclamation thereof; that in connection with said drainage system plaintiff has utilized the dry wash, known as Bitter Creek, being a natural drain line, as a drainage and irrigation ditch and has deepened said Bitter Creek as an outlet for certain drains now constructed and others to be constructed.

III.

That the defendants, Arthur W. Ide and Charles Grant Caldwell, are the owners of lands in said Townships Fifty-five (55) and Fifty-six (56) North, of Range Ninety-nine (99) West, and in Townships Fifty-five (55) and Fifty-six (56) North, of Range Ninety-eight (98) West of the Sixth Principal Meridian; that said lands were acquired by the said defendants aforesaid under the Act of June 17, 1902, and subject to the Act of August 30, 1890, and at the time of the entry of said lands by said defendants under said Acts, and at the time patents were issued to said defendants for said lands, there was reserved by said Acts to the United States a right-of-way thereon for ditches or canals constructed by the authority of the United States.

IV.

That said defendants have refused to allow or permit the plaintiff to enter upon said lands for the purpose of constructing said ditches and drain lines, as aforesaid, and resist the entry of said plaintiff upon said lands and threaten to prevent plaintiff from going upon or entering said lands for said purpose.

V.

That said conduct of said defendants has interfered with the development of said Project and has stopped the work of the plaintiff upon that portion of said project where said drain line is being constructed, to the great damage and expense of the plaintiff, and that the further progress of the work of constructing, operating and maintaining said irrigation system will be interfered with, to the great damage of the plaintiff, unless said defendants are enjoined by this Court from further interference with the plaintiff in the prosecution of said work.

Wherefore, plaintiff prays that the defendants, their agents, servants and employees, be forever enjoined and restrained from in any way interfering with the plaintiff in going upon said lands for the purpose of constructing ditches under said irrigation project.

CHARLES L. RIGDON,
United States Attorney for the
District of Wyoming.

WILLIS J. EGLESTON,
District Counsel, U. S. Reclamation
Service.
Of Counsel.

5 United States of America, } ss.
 District of Wyoming. }

Charles L. Rigdon, being first duly sworn, according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming and attorney for the plaintiff in the above and foregoing bill of complaint; that he has read the above and foregoing bill of complaint and knows the contents thereof, and that the facts therein stated are true.

CHARLES L. RIGDON.

Subscribed in my presence and sworn to before me this 3rd day of July, A. D. 1918.

(Seal).

CHARLES J. OHNHAUS, Clerk,
By FLORENCE BRADLEY, Deputy.

Endorsed: Filed in the District Court on July 3, 1918.

6 (Subpoena in chancery and Marshal's return.)

United States of America, } ss.
District of Wyoming

In the District Court of the United States for the District
of Wyoming, Sitting at Cheyenne

The President of the United States of America, to Arthur
W. Ide, Charles Grant Caldwell and H. B. Loomis,
Greeting:

You and each of you are hereby commanded, that you appear before the Judge of the District Court of the United States, for the District of Wyoming, at the city of Cheyenne, in said District, twenty days from the date hereof, to answer the Bill of Complaint of United States of America, this day filed in the office of the Clerk of said Court, in said city of Cheyenne, then and there to receive and abide by such judgment and decree as shall then or thereafter be had upon said Bill of Complaint, upon pain of judgment being pronounced against you by default, and a decree had and entered accordingly.

¶ the Marshal of the District of Wyoming to execute and make due return.

Witness, the Honorable John A. Riner, Judge of the District Court of the United States, for the District of Wyoming, and the seal of the said District Court, at the city of Cheyenne aforesaid, this
(Seal). 3rd day of July, in the year of our Lord one thousand nine hundred and eighteen and of the independence of the United States, the 142nd year.

CHARLES J. OHNHAUS, Clerk,
By FLORENCE BRADLEY, Deputy Clerk.

7

Memorandum.

The above named defendants are hereby notified that unless they and each of them shall file their answer or other defense in the office of the Clerk of said Court, at the city of Cheyenne aforesaid, on or before the twentieth day after service, excluding the day thereof, the Bill of Complaint may be taken pro confesso.

CHARLES J. OHNHAUS, Clerk,
By FLORENCE BRADLEY, Deputy Clerk.

Department of the Interior
United States Reclamation Service

Powell, Wyoming,
July 5, 1918.

Mr. D. F. Hudson,
U. S. Marshal,
Cheyenne, Wyoming.

Dear Sir:—

Subpoenas were served by me on the three defendants in the case of the United States of America vs. Arthur W. Ide, Charles Grant Caldweil and Harrison B. Loomis (No. 984 Civil). The subpoenas were served on the three defendants between the hours of six and eight P. M., July 4, 1918, at Powell, Wyoming.

Very truly yours,

GEO. O. SANFORD,
Special Deputy U. S. Marshal.

8

Marshal's Fees

Service, 3 persons, at \$2.00 each.....\$6.00

Total.....\$6.00

Endorsed: Filed in the District Court on July 13, 1918.

9

(Order setting plaintiff's application for temporary injunction for hearing.)

This matter coming on this day upon the application of the plaintiff for a temporary injunction, and the Court being fully advised in the premises:

It Is Ordered that this matter be set down for hearing on the 9th day of July, 1918, at ten o'clock A. M., of said day, and that said defendants be notified of the time and place of said hearing, and that said notice be served upon said defendants not later than the 5th day of July, 1918.

Dated at Cheyenne, Wyoming, this 3rd day of July, 1918.

JOHN A. RINER,
Judge.

10

Endorsed: Filed in the District Court on July 3, 1918.

11 Notice of Hearing on Plaintiff's Application for
a Temporary Injunction.

To Arthur W. Ide, Charles Grant Caldwell and H. B. Loomis:

Please take notice that the plaintiff has made application to the Court in the above entitled case for a temporary injunction and that the Court will hear said application of the plaintiff on the 9th day of July, 1918, at ten o'clock A. M., at the Court Room in Cheyenne, Wyoming, in accordance with an order made in said case on this day, a copy of which is hereto attached.

C. L. RIGDON,
United States Attorney for the
District of Wyoming.

12 State of Wyoming, } ss.
County of Park }

George O. Sanford, being first duly sworn, on his oath deposes and says: that he received the within notice on the 4th day of July, 1918, and served the same by delivering a true copy thereof, together with a true copy of the order of Court therein mentioned, to Arthur W. Ide, Charles Grant Caldwell and H. B. Loomis, each personally, on the 4th day of July, 1918.

GEORGE O. SANFORD,
Special Deputy United States [Marshall].

Subscribed and sworn to before me this 5th day of July,
A. D. 1918.

HENRY W. HOWELL,
U. S. Commissioner.

(Seal.)

Endorsed: Filed in the District Court on July 6, 1918.

13 (Order granting Temporary Injunction.)

This cause coming on to be heard upon the application of the plaintiff for a temporary injunction and restraining order, after written notice of the same having heretofore been served upon each of the defendants, the United States of America appearing by David J. Howell, Assistant United States Attorney for the District of Wyoming, and the defendants Charles Grant Caldwell and H. B. Loomis appearing not, and the defendant Arthur W. Ide appearing both in

person and by his attorney, William E. Mullen, and having filed a motion to dismiss plaintiff's bill of complaint;

The Court thereupon, after the oral arguments of counsel, overruled the motion of defendant to dismiss plaintiff's bill of complaint, and being fully advised in the premises,

It Is Ordered that the defendants Arthur W. Ide, Charles Grant Caldwell and H. B. Loomis, be restrained from in any way interfering with the plaintiff in the matter of constructing its ditches and canals upon lands owned by them
14 in Townships Fifty-five (55) and Fifty-six (56) North, of Range Ninety-nine (99) West of the Sixth Principal Meridian, and in Townships Fifty-five (55) and Fifty-six (56) North, of Range Ninety-eight (98) West of the Sixth Principal Meridian, and from in any way interfering with or obstructing the plaintiff in the construction, operation and maintenance of the irrigation system, known as the Shoshone Reclamation Project, until the further order of this Court.

To the overruling of defendant's motion to dismiss plaintiff's bill of complaint and to the granting of the temporary injunction and restraining order, the defendants herein are granted an exception.

Dated at Cheyenne, Wyoming, this 9th day of July, A. D. 1918.

JOHN A. RINER,
Judge.

Endorsed: Filed in the District Court on July 9, 1918.

15 (Motion of defendant Ide, to dismiss Bill of
Complaint.)

Comes now Arthur W. Ide, one of the defendants named in the above entitled cause, and moves the court to dismiss the Bill of Complaint filed by the plaintiff in said cause for the following reasons:

(1st) There is a misjoinder of parties defendant in said Bill of Complaint.

(2nd) There is an improper joinder of separate and distinct causes of action in said Bill of Complaint.

(3rd) The facts set forth in said Bill of Complaint are insufficient on the face of said Bill to constitute a valid cause of action in equity, or to entitle the plaintiff to any relief as against this defendant.

W. E. MULLEN,
Attorney for defendant, Arthur W. Ide.

16 Endorsed: Filed in the District Court on July 9, 1918.

17 Separate Answer of Arthur W. Ide.

Arthur W. Ide, one of the defendants above named, for his separate answer to plaintiff's bill of complaint filed herein alleges:

I.

Defendant admits that he is a citizen and resident of the State of Wyoming and that plaintiff is now operating and maintaining an irrigation system located in Park and Big Horn Counties, Wyoming, known as the Shoshoni Irrigation Project; that defendant is without knowledge as to the extent of plaintiff's alleged withdrawals of land from entry in Park and Big Horn Counties in connection with the construction and operation of said irrigation system; defendant admits that plaintiff has constructed certain underground conduits for the drainage of seepage lands, which drains discharge their flow into the channel of "Bitter Creek"; defendant denies that said drains are or were constructed by plaintiff under or by lawful authority of the acts of Congress referred to in plaintiff's bill and defendant denies that plaintiff has a lawful right to divert said drainage water to the canals of its said irrigation system to be used upon other lands in the regular course of the reclamation thereof;

18 defendant denies that "Bitter Creek" is a dry wash as is alleged in said bill of complaint, but alleges the fact to be that "Bitter Creek" is a natural stream and water course with an established channel and with a well established water-shed; admits that plaintiff has attempted to deepen and change the channel of said "Bitter Creek", but denies that plaintiff has a lawful right so to do; defendant denies that plaintiff has utilized the natural stream known as "Bitter Creek" as a part of its drainage and irrigation system; defendant admits that plaintiff permitted its waste and seepage waters to escape by natural percolation and

through artificial drains into said "Bitter Creek", but denies that the same was done with any intent to reclaim said waters or to utilize them as a part of its said irrigation system, and defendant denies that plaintiff has or had lawful authority so to do; defendant admits that he is the owner of lands described as "Farm Unit G" Lot Forty (40), in Township Fifty-six (56), Range Ninety-eight (98), for which he has received a homestead patent from the United States Government, but denies that he owns any other land within the Townships or Ranges specified in plaintiff's bill of complaint; admits that said lands were acquired by him under the Act of June 17th, 1902 and under the Act of August 30th, 1890 and admits that at the time of the entry of said lands by defendant and the issuance of his patent thereof, there was reserved by said acts to the United States a right of way thereon for ditches or canals constructed by authority of the United States, but denies that the ditches and canals proposed to be constructed by plaintiff and referred to in its bill of complaint are to be constructed by authority of the United States or by authority of said Act of June 17th, 1902 or said Act of August 30th, 1890; admits that he has refused to allow or to permit plaintiff to enter upon his said lands for the purposes alleged in its bill of complaint, but denies that he has prevented or threatened to prevent plaintiff from going upon or entering other lands in the

19 Townships and Ranges described in its bill of complaint of which defendant was not the owner; defendant denies that he has interfered with the lawful development of said irrigation project or has stopped the lawful work of plaintiff in the operation or maintenance of said irrigation project; denies that he has caused plaintiff damage and expense or [interfered] with the lawful work of plaintiff in the construction, operation and maintenance of its said irrigation system, or that he has damaged plaintiff in any manner whatsoever and denies that plaintiff is entitled to injunctive relief in this suit as against defendant for or on account of any of the matters and things alleged in said bill of complaint.

II.

This defendant further answering said bill of complaint and by way of defense thereto alleges that at all of the times mentioned in plaintiff's bill he was and now is the owner in fee of lands described as "Farm Unit G" Lot Forty (40), Township Fifty-six (56), Range Ninety-eight (98) in Park County, through which flows a natural stream known as

"Bitter Creek"; that said stream enters defendant's lands from the North and flows in a Southeasterly direction through defendant's lands for a distance of about one hundred and twenty rods in an established channel flowing constantly and carrying waters from the natural run-off of the water-shed of said stream and seep and percolating waters from irrigated lands lying along its course; that water rights have been appropriated and acquired by different persons and corporations from said stream, which they use for the irrigation of their lands under irrigation permits granted by the State of Wyoming.

That on or about the 29th day of June 1918; plaintiff without the consent or permission of defendant and over the protest of defendant and without permission or authority from the State of Wyoming, or lawful right or authority of

any kind whatsoever, but in violation of the Act of
20 Congress of June 17th, 1902 and of the laws of the

State of Wyoming caused a large force of its agents, servants and employees to go upon defendant's land and to commence excavating large quantities of earth from the channel of said "Bitter Creek" and from the banks of said creek in deepening and in altering the channel of said stream, which said excavated material so removed by them was deposited upon defendant's lands bordering upon said stream causing the [distraction] of defendant's crops growing thereon and destroying the use and value of said lands by rendering the same useless and unproductive and by forming irregular dikes, mounds and obstructions thereon, which will permanently interfere with the irrigation and drainage of defendant's lands and wholly destroy the same for all purposes for from fifty to one hundred feet on either side of said stream; that plaintiff has continued since said time and threatens to continue its said work of excavation of earth from the channel and banks of said "Bitter Creek" along its entire course through defendant's said lands and has notified defendant that it intends to and will cause to be excavated a canal running parallel with and along the South side of said "Bitter Creek" Southeasterly from a point on defendant's lands designated as the outlet of Drain K, a distance of about seventy rods West of the East boundary line of defendant's lands, and that it intends to and will place a diversion dam across the channel of said "Bitter Creek" at said point and divert waters from said stream through said proposed canal, which is to be constructed by plaintiff to an average depth of seven feet and with an average width of about twenty feet and that it in-

tends to and will deposit earth excavated from said canal over and across defendant's lands on either side thereof; defendant alleges that the excavation of said proposed canal and the deposit of earth excavated therefrom upon defendant's lands will destroy defendant's growing crops now being cultivated thereon by defendant and render use-

21 less an area of defendant's lands and destroy defendant's growing crops over an area aggregating about seven acres; that defendant's lands lying along said stream and along the course of said proposed canal are fertile, productive, in a good state of cultivation and are now producing crops and that the reasonable value of said lands is at least \$250.00 per acre and that the value of defendant's crops growing thereon is of the reasonable sum of \$40.00 per acre; that all of said excavation and proposed work of excavation is unnecessary, unlawful and will cause defendant great injury and damage, to-wit: in the sum of \$3,000.00.

That heretofore and on or about the month of December 1910, plaintiff fully recognized the character of "Bitter Creek" as a natural stream and thereupon made application to the State Engineer of Wyoming in writing for an irrigation permit to divert the waters of said "Bitter Creek" through a certain proposed ditch described as "Lateral C" with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99) for the proposed irrigation of about 3600 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D" from a headgate to be located in the Southwest [Southwest] corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land, both of which said applications so made by plaintiff were denied and refused by the State Engineer of Wyoming.

That for all of said unlawful acts of plaintiff and its said employees, agents and representatives, this defendant is without a plain, speedy or adequate remedy at law and will suffer great and irreparable injury therefrom unless plaintiff, its agents, servants and employees be enjoined and restrained by order of this Honorable Court from further proceeding in its said unlawful and unauthorized acts.

22 Wherefore, defendant prays that plaintiff be forthwith enjoined from doing or performing or continuing said acts and threatened acts, or any of them, and from

doing and performing any acts which will interfere with the natural condition of said "Bitter Creek", or from in any manner excavating or changing the channel thereof or depositing excavated materials from the channels or banks thereof upon defendant's lands, as herein complained of, or from constructing the proposed irrigation canal and diversion dam heretofore described, or depositing excavated materials of any kind whatsoever upon defendant's lands bordering upon said "Bitter Creek" or along the proposed course of said canal; that defendant have and recover from plaintiff his costs and disbursements in this action sustained and that defendant have judgment against plaintiff for all damages already suffered by defendant, or that defendant may hereafter suffer and up to the time of the determination of this suit by reason of plaintiff's unlawful acts and that defendant have such other and further relief as to the court may seem just and equitable.

W. E. MULLEN,

Attorney for defendant, Arthur W. Ide.

The State of Wyoming }
County of Laramie. } ss.

Arthur W. Ide of lawful age being duly sworn upon oath deposes and says: that he is one of the defendants named in the above entitled suit; that he has read the foregoing separate answer of defendant, Arthur W. Ide, and that the facts therein set forth are true.

ARTHUR W. IDE

23 Subscribed and sworn to before me on this 13th day
of July, 1918.

(Seal). CHARLES J. OHNHAUS, Clerk.
By FLORENCE BRADLEY, Deputy.

Endorsed: Filed in the District Court on July 13, 1918.

24 (Stipulation extending time of defendant
Caldwell, to file Answer.)

It is hereby stipulated and agreed by and between Charles L. Rigdon, attorney for the plaintiff, and W. B. Ross and Clark & Haggard, attorneys for the defendant Charles Grant Caldwell, that said defendant Charles Grant Caldwell may have to and including August 15, 1918, within which to file his answer herein.

Dated this 13th day of July, 1918.

DAVID J. HOWELL,
Attorney for Plaintiff.

W. B. ROSS,
CLARK & HAGGARD,
Attorneys for Defendant Charles Grant
Caldwell.

Endorsed: Filed in the District Court on August 13, 1918.

25 Separate Answer of Charles Grant Caldwell.

Charles Grant Caldwell, one of the defendants above named, for his separate answer to plaintiff's bill of complaint filed herein, alleges:

I.

1. Admits that he is a citizen and resident of the State of Wyoming.

2. Admits that, pursuant to the Act of Congress of June 17, 1902, and acts amendatory thereof, plaintiff has constructed and is now operating and maintaining an irrigation system located in the counties of Park and Big Horn, in the State of Wyoming, known as the Shoshone Irrigation Project, but alleges that he is without knowledge as to the extent of plaintiff's alleged withdrawal of land from entry in said counties in connection therewith; admits that plaintiff has constructed drainage ditches for the purpose of relieving large areas of water-logged and seepage lands from the water therein and thereon, and that plaintiff permitted the waste and seepage waters to escape from such lands by natural percolation and through said drainage ditches into the natural channel of Bitter Creek, but denies that such drainage ditches were constructed pursuant to the provi-

sions of any Act of Congress, and denies that they were constructed with the purpose of diverting said waters to the canals of said system to be used upon other lands in the regular course of the reclamation thereof, or that said waters were permitted to escape into said Bitter Creek with any intention on the part of plaintiff to reclaim said waters or to utilize them as a part of said irrigation system, but alleges that plaintiff has abandoned said waste and seepage waters, and the same have become tributary to said Bitter Creek, and alleges that plaintiff has never notified the State Engineer of Wyoming, or the water commissioner of the district where said water is to be used, of its desire to use the bed of said Bitter Creek for the purpose of carrying the water of said irrigation project; denies that plaintiff has the lawful right to divert said waters to the canals of its said irrigation system to be used upon other lands in the regular course of the reclamation thereof, or to prevent the continued escape of said waters into the channel of Bitter Creek; denies that said Bitter Creek is a dry wash, but alleges the fact to be that said Bitter Creek is and at all times has been a natural stream and water course with an established water shed and with a well-defined channel with a regular flow of water therein; that heretofore and on or about the month of December, 1910, plaintiff fully recognized the character of Bitter Creek as a natural stream and water course by making application to the State Engineer of Wyoming in writing for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest Corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land; admits that plaintiff has deepened and threatens to still further deepen said Bitter Creek, but denies that it has any right or authority so to do, and denies that there is any necessity therefor, but alleges that the channel of said creek in its natural condition is of such depth and fall that it furnishes an ample outlet for the drainage of all the lands within its water shed.

3. Admits that he is the owner of certain lands in Township Fifty-six (56), Range Ninety-nine (99), to-wit, the South Half of the Southeast Quarter and the West Half of the Southwest Quarter of Section Thirty-six (36) (or Lot Thirty-seven), in said Township and Range, but denies that said lands were acquired by him under Act of June 17, 1902, or subject to Act August 30, 1890, or that there has been reserved to the United States a right of way thereon for ditches and canals, and denies that plaintiff has any right or authority to go upon said land or to construct ditches or canals thereon.

4. Denies that he has refused to allow or permit plaintiff to enter upon his said lands for the purpose of constructing said ditches, but admits that unless prevented by order of this court, he will refuse to allow or permit plaintiff so to do.

5. Denies that he has interfered with the development of said project or has stopped the work of plaintiff upon that portion of said project where said drain line is being constructed, or that he has occasioned plaintiff any damage or expense, and denies that the further lawful progress of the work of constructing, operating and maintaining said irrigation system will be interfered with unless he be enjoined from interfering with plaintiff in constructing ditches and canals upon his land, and deepening the channel of said Bitter Creek on and above his said land.

II.

Further answering said bill of complaint, and by way of counterclaim, this defendant alleges:

28 1. That he is and at all times alleged in said bill was the owner in fee of the South Half of the Southeast Quarter and the West Half of the Southwest Quarter of Section Thirty-six (or Lot Thirty-seven), in Township Fifty-six (56), Range Ninety-nine (99), in Park County, Wyoming, which said lands he acquired by purchase from the State of Wyoming under and by virtue of the Statutes of the State of Wyoming providing for the sale of the school lands belonging to said state.

2. That Bitter Creek is a natural stream and water course in Park County, Wyoming, having an established water shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910, water from the following sources: first, the natural run-off of the

water shed of the said Bitter Creek; second, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into the said Bitter Creek, without any effort on the part of plaintiff during said time to recover or reclaim the same; third, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in drains by plaintiff and discharged into the channel of said Bitter Creek for the purpose of ridding said land of the same, and without any effort thereafter on the part of plaintiff to recover or reclaim the same.

3. That on or about December 10, 1910, plaintiff fully recognized that said Bitter Creek was a natural stream and water course, and that the waters flowing therein from the sources as above alleged were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming, 29 in writing, for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land, both of which said applications so made by plaintiff were denied and refused by the State Engineer of Wyoming.

4. That on October 6, 1910, this defendant obtained from the State Engineer of Wyoming, permits to appropriate water from said Bitter Creek through ditches described as "Caldwell Ditch No. 1," and "Caldwell Ditch No. 2," for the purpose of irrigating the above described land, and on April 22, 1915, applied to the said State Engineer of Wyoming for permits for the enlargement of said ditches, which applications are now pending.

5. That pursuant to said permits defendant constructed a diversion dam and headgate for said "Caldwell Ditch No. 1," in said Bitter Creek at a point approximately N. 65°45' W. 1334 feet from the Southwest corner of Lot 37, Township Fifty-six (56), Range Ninety-nine (99), and a diversion dam and headgate for said "Caldwell Ditch No. 2," in said Bitter Creek at a point approximately N. 59° W. 1341 feet from the Southwest corner of Lot Thirty-seven (37), Township Fifty-six (56), Range Ninety-nine (99), and has at all times since the date of said permits appropriated continuously from the waters of said Bitter Creek water to irrigate his above described lands for agricultural purposes, and has during all of said time cultivated all of said lands and used the same for raising agricultural crops.

30 6. That by reason of the facts hereinbefore alleged defendant has a right to the continued use of the waters of said Bitter Creek and to the continued diversion thereof at the above described diversion dams, which right is prior and superior to the right of plaintiff or of any other person to the use or diversion of said waters.

7. That plaintiff, pretending to be carrying out the work incident to the said irrigation project, but being without lawful right or authority so to do threatens to deepen the channel of said Bitter Creek on and above defendant's lands in such a manner that all of the waters thereof will be diverted from his said headgates and diversion dams, and defendant thereby deprived of the use of the said waters to which he is rightfully entitled, and threatens to construct a ditch or ditches which will intercept said percolating water described in paragraph 2 of this counterclaim and the waters flowing in said drainage ditches as described in said paragraph 2, and thereby prevent the same from reaching the channel of said Bitter Creek above defendant's diversion dams and headgates as they have heretofore done and are now doing.

8. That the above described lands of defendant, if they receive the waters appropriated by defendant from Bitter Creek for the purpose of irrigating them, are worth at least \$250.00 per acre, and without said water are worth not to exceed \$10.00 per acre.

9. That plaintiff threatens to go upon defendant's said land, without right or authority so to do, and to construct ditches and canals thereon, and to excavate and deepen the channel of said Bitter Creek where it flows through said lands, and to deposit upon said lands the earth removed from

such ditches and canals and from the channel of Bitter Creek, and that the construction of such ditches and canals and the deposit of the earth upon defendant's lands will destroy many acres of said lands and render them unfit for agricultural purposes, and will destroy the crops growing thereon, and will interfere with the proper cultivation and irrigation of the remainder of said lands.

31 10. That for all of said unlawful acts of plaintiff and its employees, agents and representatives, this defendant is without a plain, speedy and adequate remedy at law, and will suffer great and irreparable injury therefrom unless plaintiff, its agents, employees and representatives be enjoined and restrained by order of this Honorable Court from further proceeding with its said unlawful and unauthorized acts.

Wherefore, defendant prays that plaintiff be not granted the relief against this defendant prayed for in its bill of complaint, and that plaintiff, its agents, employees and representatives, be forthwith and forever enjoined from doing or performing or continuing said threatened acts or any of them and from doing or performing any acts which will divert the said waters of Bitter Creek from defendant's dams and headgates, and from making any excavations through or upon [defendants] lands and from depositing any excavated earth upon said lands; that defendant have and recover from plaintiff his costs and disbursements in this action sustained, and that defendant have judgment against plaintiff for all damages that he may suffer up to the time of the determination of this suit by reason of plaintiff's unlawful acts, and that defendant have such other and further relief as to the court may seem just and equitable.

CLARK & HAGGARD,
W. B. ROSS,
GEO. B. KERPER, JR.
Attorneys for Defendant Charles
Grant Caldwell.

32 State of Wyoming } ss.
County of Park }

Charles Grant Caldwell, being first duly sworn, on his oath deposes and says that he is one of the defendants named in the above entitled suit; that he has read the foregoing separate answer of defendant Charles Grant Caldwell, and that the facts therein set forth are true.

CHARLES GRANT CALDWELL.

Subscribed and sworn to before me this 10th day of August, A. D. 1918.

(Seal.)

Endorsed: Filed in the District Court on August 13, 1918.

33 (Notice of and Motion of Charles G. Caldwell
for an injunction.)

To the above named plaintiff, and to Charles L. Rigdon and
Willis J. Egleston, its attorneys:

• You are hereby notified that on Tuesday, August 27th, 1918, at ten o'clock in the forenoon, or as soon thereafter as the same may be heard, the above named defendant Charles Grant Caldwell will present to said court his motion, a copy of which is hereto attached, for an order enjoining plaintiff, its agents or representatives, from going upon said defendant's land for the purpose of constructing the ditch proposed to be constructed thereon by said plaintiff, and from constructing said ditch upon said land and from deepening or changing the channel of Bitter Creek upon said land, and from diverting the waters of said Bitter Creek from defendant's dams and head-gates, the said motion being presented upon the verified answers of defendants heretofore filed in this cause and upon affidavits and evidence to be given upon the hearing.

CLARK & HAGGARD,
WILLIAM B. ROSS,
GEO. B. KERPER, JR.
Attorneys for Defendant Charles
Grant Caldwell.

34 Receipt of the foregoing notice is hereby acknowledged this 24th day of August, A. D. 1918.

C. L. RIGDON,
[Attorneys] for Plaintiff.

35

(Motion.)

Comes now the above named defendant, Charles Grant Caldwell, and respectfully moves the court for an order enjoining the plaintiff, its officers or agents from going upon the said defendant's land for the purpose of constructing the ditch proposed to be constructed thereon by plaintiff, and from deepening or changing the channel of Bitter Creek upon said land, or from diverting the waters of said Bitter Creek from said defendant's dams and head-gates for the reason that plaintiff has no right or authority of law to go upon said defendant's land for said purposes, and has no right or authority to construct said proposed ditch upon said defendant's land or to deepen or change the channel of said Bitter Creek or to divert the waters thereof from defendant's dams or head-gates.

In support of this motion defendant will present the verified answers of defendants heretofore filed in this cause, and such other affidavits and evidence as may be available.

CLARK & HAGGARD,

WILLIAM B. ROSS,

GEORGE B. KERPER, JR.

Attorneys for Defendant Charles
Grant Caldwell.

36 Endorsed: Filed in the District Court on August 24,
1918.

37 (Notice of and Motion of Charles G. Caldwell to
dissolve Injunction Order, of July 9, 1918.)

To the above named plaintiff, and to Charles L. Rigdon and
Willis J. Egleston, its attorneys:

You are hereby notified that on Tuesday, August 27, 1918, at 10 o'clock in the forenoon, or as soon thereafter as the same may be heard, the above named defendant Charles Grant Caldwell will present to the said court his motion, a copy of which is hereto attached, for the vacation of the injunction order entered herein on July 9, 1918, the said mo-

tion being presented upon the verified answers of said defendants heretofore filed in this cause, and upon affidavits and evidence to be given upon the hearing.

WILLIAM B. ROSS,
CLARK & HAGGARD
GEO. B. KERPER, JR.
Attorneys for defendant Charles
Grant Caldwell.

Receipt of the foregoing notice is hereby acknowledged this 24th day of August, 1918.

C. L. RIGDON,
[Attorneys] for Plaintiff.

38

Motion.

Comes now the above named defendant Charles Grant Caldwell and respectfully moves the court to dissolve the injunction order entered herein on July 9, 1918, for the reason that plaintiff has no right or authority of law to go upon said defendant's land for the purpose of constructing the ditch proposed to be constructed by it thereon, and has no right or authority to deepen or change the channel of Bitter Creek, or to divert the waters thereof from defendant's dams and headgates. In support of this motion defendant will present the verified answers of defendants heretofore filed in this cause, and such other affidavits and evidence as may be available.

CLARK & HAGGARD,
WILLIAM B. ROSS,
GEORGE B. KERPER, JR.
Attorneys for defendant Charles
Grant Caldwell.

Endorsed: Filed in the District Court on August 24, 1918.

39 (Notice of and Motion of Arthur W. Ide, for
an Injunction.)

To the above named plaintiff, and to Charles L. Rigdon and
Willis J. Eggleston, its attorneys:

You are hereby notified that on Tuesday, August 27th, 1918, at ten o'clock in the forenoon, or as soon thereafter as the same may be heard, the above named defendant Arthur W. Ide will present to said court his motion, a copy of which is hereto attached, for an order enjoining plaintiff, its agents or representatives, from going upon said defendant's land for the purpose of constructing the ditch proposed to be constructed thereon by said plaintiff, and from constructing said ditch upon said land and from deepening or changing the channel of Bitter Creek upon said land, and from diverting the waters of said Bitter Creek from defendant's dams and head-gates, the said motion being presented upon the verified answers of defendants heretofore filed in this cause and upon affidavits and evidence to be given upon the hearing.

W. E. MULLEN

Attorney for Defendant Arthur W. Ide.

Receipt of the foregoing notice is hereby acknowledged this
24th day of August, A. D. 1918.

C. L. RIGDON,

[Attorneys] for Plaintiff.

40

(Motion.)

Comes now the above named defendant, Arthur W. Ide, and respectfully moves the court for an order enjoining the plaintiff, its officers or agents from going upon the said defendant's land for the purpose of constructing the ditch proposed to be constructed thereon by plaintiff, and from deepening or changing the channel of Bitter Creek upon said land, or from diverting the waters of said Bitter Creek from said defendant's dams and head-gates for the reason that plaintiff has no right or authority of law to go upon said defendant's land for said purposes, and has no right or authority to construct said proposed ditch upon said

defendant's land or to deepen or change the channel of said Bitter Creek or to divert the waters thereof from defendant's dams or head-gates.

In support of this motion defendant will present the verified answers of defendants heretofore filed in this cause, and such other affidavits and evidence as may be available.

W. E. MULLEN,
[Attorneys] for Defendant Arthur W. Ide.

Endorsed: Filed in the District Court on August 28, 1918.

41 (Notice of and Motion of Arthur W. Ide, to
dissolve Injunction Order of July 9, 1918.)

To the above named plaintiff, and to Charles L. Rigdon and
Willis J. Egleston its attorneys:

You are hereby notified that on Tuesday, August 27, 1918, at 10 o'clock in the forenoon, or as soon thereafter as the same may be heard, the above named defendant Arthur W. Ide will present to the said court his motion, a copy of which is hereto attached, for the vacation of the injunction order entered herein on July 9, 1918, the said motion being presented upon the verified answers of said defendants heretofore filed in this cause, and upon affidavits and evidence to be given upon the hearing.

W. E. MULLEN,
[Attorneys] for defendant Arthur W. Ide.

Receipt of the foregoing notice is hereby acknowledged
this 24th, day of August, 1918.

C. L. RIGDON,
[Attorneys] for plaintiff.

42 Motion.

Comes now the above named defendant Arthur W. Ide and respectfully moves the court to dissolve the injunction order entered herein on July 9, 1918, for the reason that plaintiff has no right or authority of law to go upon said defendant's land for the purpose of constructing the ditch proposed to be constructed by it thereon, and has no right or authority to deepen or change the channel of Bitter Creek, or to divert the waters thereof from defendant's

dams and headgates. In support of this motion defendant will present the verified answers of defendants heretofore filed in this cause, and such other affidavits and evidence as may be available.

W. E. MULLEN,
[Attorneys] for defendant Arthur W. Ide.

Endorsed: Filed in the District Court on August 28, 1918.

43

GOS/MW

Department of the Interior
United States Reclamation Service

Powell, Wyoming,
November Seventeenth,
1917.

Mr. W. J. Egleston,
District Counsel,
U. S. R. S.,
Cheyenne, Wyo.

Dear Sir:—

The following statement is submitted in response to your request for a description of the general conditions of Bitter Creek as known to me.

I first saw Bitter Creek in the summer of 1913 on a visit to the Shoshone Project. I became more intimately acquainted with it in 1914 when I assumed the duties of Project Manager. At that time nearly all of the land in the Garland Division below Frannie canal was being irrigated. Above the Frannie Canal there were very few units that were being irrigated and the original condition of the channels which carried surface water still existed. In practically all cases there were deep, narrow washes with vertical sides, and were the result of excessive rainfall which occurs from time to time in this section of the country. Below Frannie Canal, where these washes were located on cultivated lands, they had been filled in by the farming operations and the occasional storm waters spread over the irrigated land. The numerous small channels above described eventually came together and formed the so-called channel of Bitter Creek.

Bitter Creek is the main drainage channel of the Garland Division and the area of its water shed is about 65 square

miles. The annual rainfall in this section is just below six inches. Most of this precipitation comes in heavy cloud-bursts which are of short duration and do not extend over a very extensive area. During the past four years that I have been on the project there have usually been one or more such storms in different sections of the project. It is seldom that such storms will occur in the same place in successive years. This past summer I recall a heavy [could-burst] in the head waters of Polecat Creek on the Frannie Division. No rain fell at Deaver and there was a slight sprinkle at the tunnel camp but the storm at the edge of the bench where Polecat Creek begins, was so heavy that the resulting flood was the largest that has been observed by the engineers on the Frannie Division and it washed out a construction bridge directly south of Deaver. This storm is mentioned as it is characteristic of the rainfall in this country; short, sharp showers, with a flood flow in all depressions which scour out channels and result in large quantities of silt being carried by the water. Irrigation works on such a stream are practically out of the question as the short flow of water is not sufficient to permit any beneficial use of water. The quantity of silt carried by the water would result in canals and laterals being filled and put out of commission. Any ordinary diversion works constructed on such streams would be washed away.

44 At the present time there is a large quantity of water in Bitter Creek, especially during the irrigation season and this water comes from two sources. First, the water that is wasted from the farms that are being irrigated, second the discharge of the sub-surface drains that have been constructed. In the height of the season the greater portion of the water comes from surface waste on the farms and may range from 25 to 65 or 70 cubic feet per second. The discharge of the drains leading to Bitter Creek may reach a maximum of 40 to 50 cubic feet per second. The lower reaches of the creek carry so much water that at times it cannot be forded with safety. During the winter months there is a somewhat less flow, averaging about 15 second feet, which water comes from the sub-surface drains.

On very infrequent occasions, there may be some natural storm water reach the main channel of Bitter Creek, but this discharge is of very short duration and does not occur more than once or twice during the growing season. The very fact that no irrigation works were constructed on Bitter Creek and lands irrigated therefrom prior to the time the Reclama-

tion Service began to irrigate lands on the Garland Division is rather conclusive proof that Bitter Creek did not carry sufficient water to be of any beneficial use to the adjacent lands.

GEO. O. SANFORD,
Project Manager.

Subscribed and sworn to before me at Powell, Wyo., this 30 day of August A. D. 1918. My commission expires Mar. 21, 1922.

(Seal.) H. W. HOWELL,
Notary Public.

Endorsed: Filed in the District Court on August 30, 1918.

45

JRI/MW

Department of the Interior
United States Reclamation Service.

Powell, Wyoming,
November Seventeenth,
1917.

Mr. Willis J. Egleston,
District Counsel, U. S. R. S.
Helena, Montana.

Dear Sir:—

The main channel of Bitter Creek becomes clearly defined about four miles due west of Powell. From this point it runs in a northeasterly direction to a point one and one-half miles north of Powell. Thence its general direction is eastward to a point a half mile east of Garland. From this point it runs southeasterly to the eastern limit of the Shoshone Project.

During the summer of 1912 the topography of Bitter Creek was taken from the point where it intersects the south line of Lot 82, 55/99 to where it intersects the south line of Lot 55 55/98. At this time a location was made and profile taken of a drainage line along the Creek between the points above mentioned. Borings or soundings were taken at intervals to determine the character of the soil.

From the point four miles west of Powell to the south line of Lot 82 55/99 the Creek has not cut down to the gravel.

The banks are vertical and the bottom and sides of the creek are a sandy clay. From the south line of Lot 82 55/99 to the west interior line of Lot 81, 55/99 the Creek has cut down to the gravel to a depth of from three to four feet below the level of its banks. The banks in this distance have some slope and in some places the Creek has meandered over the [the] gravel bed. From the west interior line of Lot 81, 55/99, no gravel was found by sounding in the bottom of the Creek. The channel has vertical banks and has been cut down to a depth of from three to four feet on the upper end of this section to a maximum of about seven feet on the lower end of this section. From the south interior line of Lot 41, 55/98-99 to the south interior line of Lot 55, 55/98 the creek had cut down to an average depth of about four feet to the gravel. The banks were slightly sloping except at outside curve of the bends. Downstream from the south interior line of Lot 55, 55/98 to the eastern limits of the Project the bed of the creek is in gravel or sandrock. In this distance it meanders through a flood plain of a width from 200 to 400 feet.

Previous to the construction of drains that flow into Bitter Creek it did not discharge any water except during the irrigation season and during heavy rains or when snow was melting. Since the construction of drains there has been a continuous flow in Bitter Creek below the outlet of the uppermost drain. At the present time there is no flow of water in Bitter Creek above the outlet of Drain "N" in Lot 37, 55/99.

Very truly yours,

J. R. IAKISCH,

Asst. Engineer.

Subscribed and sworn to before me at Powell, Wyo., this 30 day of August A. D. 1918. My commission expires Mar. 21, 1922.

(Seal.)

H. W. HOWELL,

Notary Public.

Endorsed: Filed in the District Court on August 30, 1918.

47

CMJ/AH

Department of the Interior
United States Reclamation Service

Powell, Wyo. Nov. 17, 1917.

Mr. W. J. Eggleston,
District Counsel,
Cheyenne, Wyoming.

Dear Sir:—

As per your request, I submit the following with regards to the physical features of Bitter Creek:—

The main channel of Bitter Creek begins about four miles west of Powell, running in a northeastern direction until it reaches due north of Powell; thence in an easterly direction to the town of Garland; thence in a southeastern direction until it empties into the Shoshone River, tributaries to Bitter Creek emptying in from a northwesterly and northern portion of the project.

The main channel of Bitter Creek in the early days and before water was used on the project consisted of a coulee about four feet deep, with the sides perpendicular. The tributaries consisted of small coulees, emptying into the main channel. Before any water was delivered to the project, the main channel and all the tributaries were practically dry. They only ran water during the time of a heavy rain on the hills above. The first four miles of the main channel, the bed of which was mostly clay, the lower end was gravel in places.

During the early construction of the project there were no bridges across the main roads of Bitter Creek. All the material used was hauled across the creek by sloping the sides of the banks, which made a very decent forte. The first bridge necessary across the creek was established in the year 1910, after water had been used on the project two years.

As late as the year of 1912 there was no water in the creek two weeks after water was shut out of the system above closed drains. From then on to the present time the land along Bitter Creek became water-logged, and there were small holes standing in the main channel for quite a time after the water was shut out in the fall.

Bitter Creek of today is a much different condition than before water was delivered to the lands on the project.

The upper portion of the creek is considerably filled up by weeds lodging in and sediment gathering in the bottom. The lower end of the creek is much larger than it was in the early days, which was caused by the return waters from the irrigation. It is estimated during the summer months that the main channel, beginning north of Powell and extending to the Shoshone River, carries between sixty and one-hundred second feet. This amount includes water delivered to the creek by the closed and open drains.

C. M. JUMP,
Supt. of Irrigation.

Subscribed and sworn to before me at Powell, Wyoming, this 30th day of August, A. D. 1918. My Commission expires Mar. 21, 1922.

(Seal.) H. W. HOWELL,
Notary Public.

Endorsed: Filed in the District Court on August 30, 1918.

49 (Affidavit of Willis J. Egleston, on behalf of the
United States.)

Willis J. Egleston being first duly sworn, in pursuance of law, deposes and says: That he is a citizen of the United States and an employee of the United States Reclamation Service of the Department of the Interior; that his post office address is Helena, Montana, and that in respect of the matters and things contained in the Separate Answer of Charles Grant Caldwell, in the above entitled case, has to say:

1. That on, to-wit: June 17, 1902, the United States was the owner of more than 1,000,000 acres of land situated in Big Horn County, Wyoming, a part of which County is now embraced in the County of Park, Wyoming, through which lands flows the Shoshone River. These lands were on and before the said date vacant public lands of the United States, arid in character and incapable of producing agricultural crops without artificial irrigation; but a large portion of these lands were and are susceptible of reclamation and of being made of great value as agricultural lands by irrigation from Shoshone River, from which source alone such irrigation waters can be supplied. The natural flow of water in the Shoshone River varies greatly during the crop grow-

ing season of each year, ranging from a few hundred
50 second feet flow to several thousand second feet flow
in time of flood.

2. In the year 1803 the United States by the Louisiana purchase became the owner and [proprietor] of the territory now constituting the State of Wyoming east of the continental divide, including the water shed of the Shoshone River and the lands tributary thereto, and on the said date the United States became the exclusive owner and proprietor of all lands, water rights, and other real property rights in said territory. On to-wit: June 17, 1902 the United States of America was the owner and proprietor of the right to the beneficial use of the waters of the said Shoshone River and its tributaries except so much thereof as had been heretofore granted by the United States under its laws to water users, appropriators and land owners in Wyoming. The amount of water appropriated and granted to appropriators and [reparian] users under the provisions of the laws of the United States and the Government's patents had in 1902 increased to such an extent as to lessen the flow of the Shoshone River at its low stages but to no extent to affect appreciably the flood flow of the said river, thereby leaving a large surplus of unappropriated waters owned by the United States for further use for storage and direct diversion for irrigation and other beneficial purposes by the United States and others.

3. In order that much of the arid region of the United States heretofore utilized only for grazing purposes might by means of national irrigation be disposed of, improved and rendered fertile and productive and capable of supporting and providing homes for a large population and thereby adding to the wealth, welfare and prosperity of the nation, the Congress of the United States in the year 1902 enacted what is known as the Reclamation Act, approved June 17, 1902 (32 Stat., 388) entitled: An Act appropriating the receipts from the sale and disposal of public land in
51 certain States or Territories to the construction of
irrigation works for the reclamation of arid lands."

By said Reclamation Act and acts amendatory thereof and supplemental thereto, the Secretary of the Interior was authorized and directed to construct works for the storage, diversion and development of waters and thereby to reclaim arid public lands and others arid lands by irrigation, and immediately prior to the time for beginning of surveys for contemplated irrigation works to withdraw from all forms

of entry or sale, except under the homestead laws of the United States, all public lands believed to be susceptible of irrigation from said contemplated irrigation works, and also to withdraw from all forms of entry all reservoir sites to be used by the Government for the impounding of its waters for the irrigation of its arid lands and such arid lands as are susceptible of irrigation from said works.

4. With a view to reclaiming, by means of irrigation under said Reclamation Act, so much of the lands mentioned in paragraph 1 hereof and other lands as could be reclaimed by irrigation works to be undertaken in furtherance of the provisions of said act, the Secretary of the Interior, acting in accordance with and under the authority of said Reclamation Act, on to-wit: April 15, 1904, duly and regularly [withdraw] from public entry certain of said public lands situated on the Shoshone River in the [country] of Bighorn in the State of Wyoming for reservoir purposes and for irrigation works contemplated under the provisions of the Reclamation Act for the purpose of constructing a reservoir and storing the surplus unappropriated waters of the Shoshone River in said reservoir for the irrigation of arid lands. And with the said same end in view for the reclamation of said lands, the Secretary of the Interior, acting in accordance with and under the authority of said Act of Congress, on to-wit, April 21, 1903, and March 11, 1904, duly and regularly withdrew from all forms of entry or sale, except under the homestead laws of the United States, as permitted by and in conformity with the said Reclamation Act the public lands in said county of Bighorn in the State of Wyoming.

5. Upon withdrawal from entry of said lands as aforesaid, the Secretary of the Interior, acting in accordance with and under said Reclamation Act, investigated the practicability of a government reclamation project called the Shoshone Project, embracing said arid lands, made an investigation of the waters which were and are necessary for the irrigation of said lands, and after such investigation said Secretary of the Interior determined that said project was practicable and feasible and its carrying out advisable, and he, the said Secretary of the Interior, determined upon, and on to-wit the 10th day of February 1904, authorized and immediately began the carrying out of said project and the construction of the irrigation works thereof.

6. On to-wit, April 21, 1903; March 11, 1904; and April 15, 1904, the United States of America was the owner, as afore-

said, of the usufruct of and had the usufructuary right to all of the waters of the said Shoshone river, including its tributaries, not theretofore duly appropriated and granted under the laws of the United States. The United States on said dates by withdrawing from entry as aforesaid the lands hereinabove mentioned, and by establishing, adopting and determining upon, giving notice of and authorizing the said Shoshone Project, and by asserting its right in and to said waters, and by permits granted by the State of Wyoming, and by doing other acts and things, did reserve from further appropriation, retain, appropriate to its own use and set aside for governmental reclamation and irrigation purposes so much of the said waters of the Shoshone river, its sources and tributaries, not theretofore lawfully appropriated by or granted to others by the United States, as it should see fit for the proper irrigation of such arid lands susceptible of reclamation and irrigation from the works of said project and for such power and domestic purposes as may be incident to such use, which amount of water so reserved

53 by the United States was and is such amount as may be stored in the Shoshone reservoir and available by direct diversion from the Shoshone river of the then surplus and unappropriated waters, together with all waters to be developed on said project or in connection therewith.

7. The work upon the construction of the said Shoshone project [began] in the year 1904 and said work has been continued with great diligence and without interruption from said date to the present time. In the construction of said work the United States has expended a sum in excess of five million three hundred and twenty eight thousand dollars (\$5,328,000.) to, date in the construction of reservoirs, dams, ditches and laterals, and in necessary surveys and other work, and it is expected to expend about five million (\$5,000,000.) dollars more upon said project.

8. The principal engineering features of said reclamation project thus far constructed consist of the Shoshone storage reservoir, situate in the county of Park in the State of Wyoming, having a storage capacity of 456,000 acre feet, which was begun in 1905 and completed at an expense of one million three hundred and sixty-four thousand (\$1,364,000.) dollars. The storage water from said reservoir is carried down the Shoshone river as a carrying channel and is diverted at or near Corbett in Park County, Wyoming, and will be diverted at other points along the river. The diversion dam at Corbett is a substantial concrete dam across the

Shoshone river constructed at an expense of more than ninety-seven thousand (\$97,000.) dollars to divert water into the Corbett Tunnel, which was constructed at a cost of about one million dollars, and thence into the Garland Canal. The said Garland Canal and distribution system constructed at a cost in excess of two million dollars, being the principal canal of the Government on the north side thus far completed, diverts about 1,000 cubic feet of water per second of time from the Shoshone river, is more than 50 miles in length and, with about 286 miles of lateral ditches will irrigate about 80,000 acres of land. The water
54 diverted thru said Government works was first applied for the irrigation of lands mentioned herein during the summer of 1908 and has been continuously applied to more and more lands under said project until at the date hereof about 55,300 acres of lands under said canal are being supplied from and thru said canal.

9. The total amount of lands that will be irrigated from the said irrigation works of the United States, comprising the Shoshone project when said project is completed, will be approximately 150,000 acres. The total amount of lands for which water is now supplied is over 50,000 acres.

10. In 1899 there was segregated to the State of Wyoming by the United States under the provisions of the Act of August 18, 1894 (28 Stat. 422) known as the "Carey Act" a tract of land of about 60,000 acres. After the investigation of the character of the said lands in pursuance of law, under the direction of the Secretary of the Interior, the segregation was approved by the Interior Department under date of June 19, 1901. Under date of May 22, 1899, the State Engineer of Wyoming issued a permit for the diversion from the Shoshone River of the amount of water necessary to irrigate the arid lands with the limitation of one cubic foot per second of time for each seventy acres of land reclaimed. Under date of January 26, 1903, the Governor of Wyoming requested the United States to receive a relinquishment by the State of the said tract of segregated land and a transfer of the said water permit issued for the irrigation thereof, to be irrigated and reclaimed by the United States together with other lands. The United States accepted the transfer of the said lands and the assignment of the said water permit with the express understanding that the State would cooperate in relation to the said transfers and the irrigation and reclamation of the said lands, and with the understanding, that no legal obstacles would be interposed by the State

to the construction of such irrigation works which would be carried out on a scale larger than was possible by private enterprise and would by the utilization of the forces
55 of nature create enormous values to the State of Wyoming, thus conferring a great public benefit. The permit so issued by the State Engineer of Wyoming and thereafter assigned to the United States, recited that the tract of land described heretofore as the lands of the defendant together with other lands were to be irrigated thereunder. On February 13, 1904, all rights under the said permit dated May 22, 1899 were assigned to the Secretary of the Interior.

11. On to-wit, March 5, 1904, the United States filed in the office of the State Engineer of the State of Wyoming an application, in due form, for a permit in conformity with the laws of the State of Wyoming for the construction of the Shoshone reservoir and a notice of the government's withdrawal and reservation of its surplus and unappropriated waters of the Shoshone river for the government reclamation purposes aforesaid; which application was thereafter duly allowed by the proper officials of the State of Wyoming.

12. On to-wit, March 28, 1904, the United States filed in conformity with the laws of the State of Wyoming an application, among others, for a permit in due form to construct the Garland canal and a notice of the withdrawal, reservation and utilization by the United States of its said surplus and unappropriated waters for the governmental reclamation purposes aforesaid of the Shoshone project, which application was duly allowed by the proper officials of the State of Wyoming.

13. On to-wit, the 3rd day of January, 1910, the United States filed in conformity with the laws of the State of Wyoming an application for a permit in due form for the construction and operation, among others, of the Garland canal and distribution system, and a notice of the withdrawal, reservation and utilization by the United States of its surplus and unappropriated waters aforesaid for the governmental reclamation purposes aforesaid of the Shoshone project; which application was duly allowed by the proper officials of the State of Wyoming, the priority therefor relating back to May 22, 1899.

56 14. On March 28, 1904, and on January 3, 1910, and at all times since, it has been the declared purpose and well known intention of the United States as a part

of the Shoshone project to conserve and utilize all waters to the fullest extent possible, and that when the same have been stored, diverted or utilized on one farm to pick up, to collect, convey and utilize all waste, seepage, percolating and developed waters arising from such use and to utilize the same on farms lying thereunder wherever and whenever possible, the intention of the United States being not to abandon or release any of the waters of the Government brought into said project and carried thru its works until they had performed their highest possible duty in recognition of the fact that it is impossible to operate a large irrigation system without the development of a certain amount of waste, surplus, seepage and percolating waters.

15. In due time and in furtherance of the said project for the reclamation and irrigation of said arid lands, the United States on or about the 31st day of December 1910, presented in due form a notice to the State Engineer of the State of Wyoming of its intention to collect, develop and utilize all excess, waste, seepage, drainage and developed water arising or appearing within said project draining or wasting into Bitter Creek and resulting from the bringing of the government's water to said project, for the irrigation of the lands under said project with said government's water. Thereafterwards the State Engineer of the State of Wyoming, in disregard of the Government's rights and intention, refused to receive said notice and application for permit or allow the same, altho the State of Wyoming retained the filing fee therefor paid by the United States at the time same was presented for filing and allowance. The said application for permit was accompanied by a list and a map showing the lands proposed to be irrigated by the waste and seepage water to be so diverted from Bitter Creek, which list and map included and embraced the said lands of the defendant. The plaintiff is informed and believes that the grounds given for the rejection of said notice and application was that the lands for which said waste, seepage, drainage and developed waters were to be applied were embraced in prior approved claims for water appropriations made by the United States to be applied by direct diversion from the Shoshone River, and that an additional or supplementary appropriation therefor could not be approved under the state laws, but that the same could only be allowed for lands for which no appropriation had ever been made.

16. Prior to the year 1908 the United States constructed as a part of its said project the Garland canal above and around the lands tributary to the drainage line known as

Bitter Creek. Beginning with the year 1908 the government's water was run through the Garland canal around and above the said areas and the lands therein were supplied with water for irrigation. Prior to the construction of said canal the lands adjacent to and in the vicinity of Bitter Creek were arid lands incapable of agricultural cultivation without artificial irrigation and there was no flow of water in the depression known as Bitter Creek, but the same was a long depression, without a living source, and was not a natural stream or water course. At certain times but not regularly, and due to heavy rains or snow, a flow of water occurred in the said Bitter Creek but such flow was seldom in the irrigation season and was not used and could not have been used as a supply for irrigation. Such waters were surface waters temporarily collected and were not a natural stream or any part thereof. Immediately upon the carrying of water in the government's Garland canal around and above Bitter Creek and the application of irrigation water from the government's canal upon the lands situated in and on the sides of Bitter Creek, waste, return, percolating and seep water began to appear in portions of Bitter Creek to such an extent that an increasing and continuous stream was created. Adjacent areas of land in the vicinity became saturated and required drainage in order to retain their productivity and secure the highest agricultural returns. There is an area of about 17000 acres in the northerly portion of the said Shoshone Project that is partly seeped or threatened with seepage which is the usual and natural condition in similar topography when irrigation on an extensive scale has been advanced to a certain stage. In order to maintain this land in a productive condition it is necessary to construct upwards of sixty miles of drains which the United States is constructing at an estimated total cost in excess of five hundred thousand (\$500,000.) dollars. The first essential of an effective drainage system is an adequate outlet and the topography of the land is such that all of these drains must be constructed toward Bitter Creek which is the only physically feasible outlet, and requires only to be deepened to serve as such outlet.

17. Beginning in the year 1910 in furtherance of said project and for carrying out the express purposes thereof and in contemplation of the condition heretofore described, to develop and collect waters on said project to drain such water logged land and to utilize said waste, percolating and seepage waters, and in accordance with notices theretofore

given, as above stated; the United States constructed upon the Shoshone Project in the vicinity of Bitter Creek large and deep drainage ditches for the development and collection of waste, percolating and seep waters resulting from the irrigation with Government water of lands under said project. The natural lines of drainage for the said Project included and involved the use of Bitter Creek as a drainage line and the plans therefor and the drainage construction contemplated such use; construction work was begun and continued with Bitter Creek as a main trunk drain and the plans for construction of drains and the actual construction thereof have not been changed nor interrupted except as to the acts of the State officials at the instance of the defendant as aforesaid, from the initiation of drainage work up to this date.

18. In the spring of 1917, in furtherance of the said project and for carrying out the express purposes thereof to drain water-logged lands and to utilize the waste, percolating and seepage waters, and in accordance with the notices theretofore given, the United States constructed at the crossing of Lateral Canal "C" in Bitter Creek a turnout structure, and diverted waste, percolating and drainage water into said Lateral Canal "C" for the irrigation of lands upon the said Shoshone Project, all in pursuance
59 of its reservations, appropriations, notices and other expressions of intention; and the United States did, during the season of 1917 and to this date has diverted and applied for beneficial purposes such waters from the said structure in furtherance of its general scheme of development.

19. Since 1910 the United States has constructed additional drains each year for the reclamation of seeped lands and in order to utilize the waste and drainage water for the irrigation and reclamation of the lands of the project, and such drainage waters have been put to beneficial use. By the construction of additional drains the amount of water in Bitter Creek has increased each year and while in the present season more than 20 second feet of water is being applied to beneficial use, it is the plan of the United States to divert and use to irrigate the project lands about 110 second feet at the time of the final drainage development.

20. On October 6, 1910, the defendant Charles Grant Caldwell obtained from the State Engineer permits to divert water from Bitter Creek for the irrigation of his said land, which permits covered 80 acres of land, which said lands

were described in the permit from the State of Wyoming for the irrigation of the Shoshone Project with a priority relating back to 1899, and the said lands are included in the areas covered by the permits of the United States heretofore described as approved by the proper officials of the State of Wyoming, and the said lands of the defendant were described in the application of the United States for a permit to divert and use the said waste, seepage and drainage waters from Bitter Creek made on December 31, 1910, and thereafter denied and returned without approval by the State Engineer of Wyoming. The United States planned the construction of the Shoshone Project with the view, in pursuance of the law, of returning to the Reclamation

60 Fund the cost of construction of the Project apportioned equitably to the irrigable lands thereof, and in the lay-out of work and the apportionment for reimbursement the said lands of the defendant were considered as being obligated to receive irrigation water from the project water supply and to return to the Reclamation Fund the estimated cost of construction, inasmuch as they were arid lands and without value except by the application of irrigation water and inasmuch as the cost of such irrigation water to such lands would be much less than the enhanced value of such land by reason of the application of the water to beneficial use. It was reasonable to assume and it was assumed that all areas of agricultural land within the limits of the Shoshone Project and to which water could be applied from the Shoshone Project system would receive a benefit from such irrigation water and would repay their proportions of the cost of the project. The lands of the defendant have not paid to the United States any amount of money either for construction charges or for operation and maintenance charges in return for the great expense incurred by the United States in storing, diverting and transporting the said water by means of the Shoshone Reservoir, the Shoshone River, Corbett Dam and Tunnel, the Garland Canal and other works, including the rectification of the channel of Bitter Creek to make available to the defendant the water it has diverted under presumed authority of law and applied to beneficial use upon said lands. The United States has not interfered with the use by the defendant of such waste, seepage and drainage water and the direct diversion from Bitter Creek until it was necessary in the proper and orderly prosecution of its drainage and irrigation works which would be in physical conflict with the irrigation operations of the said defendant. The United States reasonably expected to receive as a [reimbursement]

for the furnishing of water to the said lands of the defendant and as the proportionate repayment of the cost of construction of the project a sum in excess of \$9000, which amount if not returned by the said lands, must be contributed and returned by other lands of said project.

61 21. The drainage works as well as the irrigation works constructed and being constructed by the United States are calculated to and will when completed, benefit the lands of the defendant in common with all other lands on the Shoshone Project. The act of the Wyoming Legislature February 21, 1905, being Sec. 3890, Wyoming Compiled Statutes for 1910, provides for a grant to the United States of a Right of Way for ditches constructed by or under the authority of the United States and it is under and in pursuance of this provision of the Wyoming law that the United States has taken Right of Way over State land and has constructed ditches thereon on the Shoshone Project, and in pursuance of its construction plans will construct additional ditches upon State lands in the work necessary to complete the Project. In pursuance of the provisions of the said law the United States has taken and is using a Right of Way for ditch in the channel of Bitter Creek for irrigation and drainage purposes and in connection with the announced program of construction of the Shoshone Project.

22. At all times and dates mentioned herein, the construction works and all of them, including the right of way for ditch in the channel of Bitter Creek, were and are now the property of the United States upon the lands of the United States; were and are held and used by the United States for a public benefit, and were then and have at all times been and are now by law entitled to be in the exclusive possession, management and control of the United States. At said time the said waters flowing in Bitter Creek were and have at all times been and are now the property of the United States, which the United States is now and has at all times been entitled to control, dispose of, or use for beneficial purposes as and when it may see fit. The defendant threatens and asserts that he will continue to interfere with said drainage and irrigation works of the United States and take said water as aforesaid, and use the same, and will continue to interfere with and prevent the Government's reclamation officials from operating the said ditches and works constructed by and belonging to the United States as a part of its said reclamation project, and continue

62 to interfere with the possession and control of said property of the United States unless restrained by the order of the Court, all of which acts of said defendant

hereinbefore complained of have resulted and will result to the great and irreparable injury of the United States and the public welfare.

And further, affiant [sayeth] not.

WILLIS J. EGLESTON.

Subscribed and sworn to before me this 30th day of August, A. D. 1918.

CHARLES J. OHNHAUS,

(Seal.)

Clerk of U. S. District Court
District of Wyoming.

Endorsed: Filed in the District Court on August 30, 1918.

63 (Affidavit of Charles P. Williams, on behalf of
the United States.)

CHARLES P. WILLIAMS, being first duly sworn in pursuance of law, deposes and says: That he is a citizen of the United States and an engineer by profession and that he is an employee of the United States Reclamation Service of the Department of the Interior, with the designation of Assistant Chief of Construction; that his postoffice address is Denver, Colorado; and that in respect of the matters and things contained in the separate Answer of Charles Grant Caldwell, in the above entitled case, has to say:

1. That he was Project Manager of the Shoshone Project, Wyoming, from December, 1910, until October, 1912.

2. That the irrigation plan of the Shoshone Project provides for the storage of flood waters of Shoshone River in a reservoir controlled by Shoshone Dam, and about eight (8) miles above Cody, Wyoming; the diversion of water from Shoshone River by a dam at Corbett, about sixteen (16) miles below the reservoir, and through the Corbett tunnel into a canal system supplying water to lands on the north side of the river in the vicinity of Ralston, Powell, Garland, Mantua, Frannie, and Deaver; the diversion into the Willwood Canal for the irrigation of lands on the south side of the Shoshone River; and the diversion into the north side High Line from the Shoshone Dam for the irrigation of lands lying on the north side of the Shoshone River above the Garland Canal system, and extending from the lower end
64 of the Shoshone Canyon near Cody to the divide between the Shoshone River and Clark Fork drainage.

3. That the Shoshone Dam, the Corbett Dam, the Corbett Tunnel and the Garland Canal have been completed and that a considerable portion of the Frannie Canal has been completed.

4. That distribution systems have been completed for about forty-five thousand (45,000) acres in the Garland Division of the project and for about ten thousand (10,000) acres in the Frannie Division and are nearing completion for about ten thousand (10,000) acres additional in the Frannie Division.

5. That a sum in excess of five million dollars (\$5,000,000) has already been expended on the construction of the Shoshone Project and that large additional expenditures are being made each year in continuing the construction of the project.

6. That deponent knows this defendant and is well acquainted with his (Caldwell's) lands, situated in Lot thirty-seven (37), Township fifty-six (56) North, Range ninety-nine (99) West, Park County, Wyoming.

7. That the lands of this defendant are situated in the Garland Division of the Shoshone Project and are among the lands which it was originally intended to irrigate from canals to be constructed by the United States.

8. That in deponent's opinion this defendant's land, without irrigation, would be practically valueless, but that with irrigation it would be valuable land, its value probably being about one hundred fifty dollars (\$150.00) per acre.

9. That this defendant can obtain, if he desires it, a water right under the canals constructed by the United States, it being the original plan to irrigate the lands owned by him from the Shoshone Project canals.

10. That at the time this defendant's irrigation works were last seen by [deponent] they were of an inferior character and not comparable to works constructed by the United States.

11. That deponent is well acquainted with the location and character of Bitter Creek and with the topography of its drainage basin.

12. That prior to the construction of the Shoshone Project, there was no natural flow in Bitter Creek, except at very long and irregular intervals, and that any flow of the creek which might occur was not such as could be depended upon for the irrigation of any land, and that at the times when

there would be requirement for irrigation Bitter Creek would almost invariably be totally dry.

13. That the proper development of an irrigation project where large areas are to be irrigated renders it economically necessary to intercept waste and return water and use the same for irrigation, as otherwise the main canals must necessarily be constructed of a much larger capacity than is justifiable with increased unnecessary cost.

14. That the United States has contemplated the use of waste and seepage water on the Shoshone Project, as is evidenced by the statement in the Twelfth Annual Report of the Reclamation Service, which is for the fiscal year 1912-1913, a quotation from this report reading as follows:

"The United States claims all waste, seepage, spring and percolating water rising within the project and proposes to use such water in connection therewith."

That the use of return and seepage water was contemplated before that time is evidenced by references thereto in the report of the Board of Army Engineers appointed by President Taft to review all irrigation projects and make report upon their condition and requirements for further construction, the quotations being found at pages 154 and 197 of Public Document No. 1262, 61st Congress, 3d Session.

15. That the capacity of the Corbett Tunnel and the Garland Canal at its head is approximately one thousand (1,000) second-feet, from which canal is irrigated not only the lands in the Garland Division but also those in the Frannie Division, the Frannie Canal being a branch of the Garland Canal.

16. That from the Garland Canal and its branch, the Frannie Canal, it is proposed, and has always been proposed, to irrigate about eighty-five thousand (85,000) acres or more.

17. That the irrigation of such an area with the quantity of water named will require very economical use and the utilization of all waste water and drainage water which can be recaptured.

18. That the failure or neglect to use all seepage and waste water which can be recaptured will necessarily result in a reduction of the irrigable area as originally and now planned.

19. That at the present time the area under irrigation requires the operation of the tunnel and canal to about its maximum capacity, relatively little drainage or seepage water having been recaptured and reused to the present time.

20. That a considerable portion of the Garland Division of the Shoshone Project has been affected by seepage.

21. That it has been the policy and is the plan to construct drains for draining the seeped areas as these areas became seeped or threatened, and it is proposed to expend, including the amounts already expended for the drainage system, a sum in excess of five hundred thousand dollars (\$500,000).

22. That practically the entire portion of the Garland Division for which drains have not yet been constructed will require drainage as is evident from the occurrence of seepage in many localities and from the gradual rise in ground water over practically the entire area.

23. That at the time deponent was Project Manager of the Shoshone Project, he contemplated the use of Bitter Creek as a main project drain.

24. That at that time it was deponent's opinion, and it is still his opinion, that the deepening of Bitter Creek is necessary for the proper drainage of a large portion of the project.

25. That the area which will be damaged by seepage if this drain is not constructed will be many times the area of the lands owned by this defendant.

26. That the lands of this defendant probably will become affected by seepage unless provision is made for draining such lands.

And further, deponent saith not.

CHAS. P. WILLIAMS.

Subscribed and sworn to before me this 29th day of August, A. D. 1918.

ARTHUR W. BLAIR,
Notary Public.

My commission expires July 19, 1921.
(Seal.)

Endorsed: Filed in the District Court on August 30, 1918.

68

(Affidavit of Arthur W. Ide, on behalf of
defendants.)

The State of Wyoming }
County of Laramie. } ss.

ARTHUR W. IDE of lawful age being first duly sworn according to law deposes and says:

That he is a resident of Park County in the State of Wyoming and makes his home upon certain lands to which he holds title described as ["Farm Unit G], Lot Forty (40), Township Fifty-six (56), Range Ninety-eight (98) N. and for which he has received a patent from the United States Government; that all of said tract is in a high state of cultivation and is producing crops of alfalfa, sweet clover and brome grass; that a natural water course known as "Bitter Creek" crosses deponent's lands from Northwest to Southeast, there being about one hundred and twenty (120) rods of the channel of said stream so situated upon deponent's lands; that the lands owned by deponent for twenty (20) or thirty (30) rods on either side of said stream are more fertile and productive than other portions of deponent's farm and are of the reasonable value of at least Three Hundred Dollars (\$300.00) per acre; that some time during the early part of June 1918, one George O. Sanford and others claiming to be in the employ of the United States Government announced their intention of going upon deponent's lands without permission, for the purpose of constructing drainage canals and ditches thereon, and deponent on or about the 28th day of June 1918 served notice upon said persons warning them not to trespass upon his property; that thereafter and on the 29th day of June 1918, one George O. Sanford representing himself to be Project Manager in the employ of the United States Government mailed a communication to deponent in which he notified deponent that it was the intention of the government to deepen Bitter Creek through deponent's lands and to construct a canal out of Bitter Creek at a point commencing at the outlet of what is known as drain "K", for the purpose of diverting the waters of Bitter Creek down to the end of the Garland Canal and warned deponent that the government had a right to do so under the Act of August 30th, 1890, and that if deponent interfered with said work the fact would be reported to the Department of the Interior for official action; that on the afternoon of June 29th, 1918, a force of men came upon deponent's lands with a steam shovel and commenced excavating earth from the channel of Bitter

Creek and dumping the same over and upon deponent's cultivated lands, destroying deponent's growing crops and rendering portions of deponent's lands unproductive; also forming dikes which interfered with the proper irrigation and drainage of deponent's lands and otherwise greatly injuring and damaging deponent's lands; that on July 1st, 1918, deponent swore out warrants for the arrest of one Peterson, one Baxter, one Ben Lutz and one L. Plummer, charging them with criminal trespass, and the said Peterson and Baxter plead guilty to said charge and were fined by a Justice of the Peace, the case against the other two not having been disposed of; that said persons whom deponent believes to be operating under the directions of George O. Sanford have continued committing acts of trespass upon deponent's lands; that deponent has been unable to further prosecute said persons owing to threats and representations made to public officers by the said George O. Sanford; that the said Sanford and his employees while pretending to act under official authority in committing said acts of trespass and damage to de-

70 ponent's property are as deponent believes acting illegally and wrongfully and threaten to further continue their acts of trespass by further altering and excavating from the natural channel of Bitter Creek at other places upon deponent's lands and also by constructing and excavating a large irrigation canal running parallel with Bitter Creek from a point designated as the outlet of drain "K" on deponent's lands, for the purpose of diverting waters from Bitter Creek for the irrigation of lands owned by persons to deponent unknown and thus committing further acts of injury and damage to deponent's lands by destroying the production and use thereof and by the [distruction] of deponent's growing crops now being produced thereon; that said unlawful acts of trespass have been arbitrary, malicious, without lawful right and without permission from deponent and in violation of warnings given said persons by deponent.

Deponent further says that there is pending in this court a civil action Numbered 983 wherein Lincoln Land Company, a corporation, et al. are plaintiffs and Frank Weymouth and George O. Sanford are defendants, wherein it is sought by plaintiffs, who claim to be the holders of water right appropriations from Bitter Creek for the irrigation of their lands situated west of deponent's lands, to enjoin the said Sanford and the said Weymouth from diverting the waters of said Bitter Creek; that said suit was filed in this court on the 2nd day of July 1918 and the said defendants, Weymouth and Sanford, are alleged to be officers of the United States

Reclamation Service, but acting wrongfully and without lawful authority in their attempt to divert the waters of said Bitter Creek from dams placed therein by the said plaintiffs for the irrigation of their lands; deponent further says that the right of the United States Government to divert the waters of Bitter Creek is now in litigation in this court and undetermined and that if it should be determined by this court that said officers are acting unlawfully and without authority to excavate or deepen the channel of Bitter Creek

or to divert water therefrom for any purpose, then the
 71 object sought to be attained by this suit would be defeated, and deponent therefore alleges that no further steps should be taken in this suit until said suit Numbered 983 has been determined and decided; deponent further says that the acts of unlawful and unauthorized trespass which are now being committed by direction of the said George O. Sanford claiming to act as Project Manager of the Government irrigation canals of the Shoshoni Project, but in fact acting without lawful authority, should be ordered discontinued and that he and all other employees of the United States Government should be ordered to cease their acts of trespass and damage until this suit and civil action Numbered 983 above mentioned have been determined by this court upon the facts and the law applicable thereto, as otherwise great and irreparable injury and damage may be done to deponent's property, for which he would be without a remedy.

Deponent further says that defendant, H. B. Loomis, has no interest whatsoever in this suit, nor has he any joint interest or connection with deponent herein; that defendant, Charles Grant Caldwell, is the owner of lands lying to the West of deponent and has no interest whatsoever in deponent's lands, nor insofar as this deponent knows any interest in this suit, and neither the said Loomis nor the said Caldwell should be joined as defendants in this suit, as neither of them are jointly interested with deponent in any lands whatsoever here in controversy, and deponent has no interest whatsoever in any lands or holdings of the said Caldwell.

ARTHUR W. IDE.

Subscribed and sworn to before me on this 9th day of July 1918.

BLANCHE O. LUMMIS.

(Seal.)

Notary Public.

72 Endorsed: Filed in the District Court on August 30, 1918.

73 (Affidavit of Charles G. Caldwell on behalf of
defendants.)

State of Wyoming, }
Park County. } ss.

Charles Grant Caldwell being first duly sworn, on his oath deposes and says:

That he is one of the defendants in the above entitled action, that he is fifty years of age, and is a resident of Park County, State of Wyoming;

That in the year 1910 he purchased from the State of Wyoming, the west one-half of the southwest one quarter of section thirty six, or lot thirty seven, township 56 north, range 99 west of 6th P. M. comprising eighty acres more or less; that said land was appraised before the purchase of the same by affiant for \$32.00 an acre and affiant paid for said land the sum of \$24.00 an acre; that most school land sold within the past nine years in Park County has been appraised at from \$13.00 to \$14.00 an acre; that the land purchased by affiant as aforesaid was appraised at a higher figure for the reason that said land could be irrigated from Bitter Creek without purchasing a water right from the United States of America; that said land was and is located within the Shoshone Reclamation Project;

74 That [in] October 6, 1910, affiant obtained from the State Engineer of the State of Wyoming, permits to appropriate water from Bitter Creek through ditches described as Caldwell Ditch No. 1 and Caldwell Ditch No. 2, for the purpose of irrigating the above described land, and on April 22, 1915, applied to the said State Engineer of Wyoming for permits for the enlargement of said ditches, which applications are now pending;

That pursuant to said permits defendant Caldwell, the affiant, constructed a diversion dam and headgate for said Caldwell Ditch No. 1, in said Bitter Creek at a point approximately N. 65 degrees 45 minutes west 1334 feet from the southwest corner of the above described land, and also a diversion dam and headgate for said Caldwell Ditch No. 2, in said Bitter Creek at a point approximately north 59 degrees west 1341 feet from the southwest corner of said land, and that affiant has at all times since the date of said permits appropriated continuously from the waters of said Bitter Creek water to irrigate his above described lands for

agricultural purposes, and has during all of said time cultivated all of said lands and used the same for raising agricultural crops;

Affiant further deposes and says that Bitter Creek is a natural stream or water course consisting of two branches which flow in an easterly direction and come together on said described land of affiant; that one branch is known as the "North Branch of Bitter Creek", and which branch each year receives the rain waters and melted snow from land located in township 56 north of range 99 west 6th P. M., said land constituting a water shed of approximately 16 square miles in extent; that said North Branch is a natural stream or water course, consisting of a definite channel through its whole course, having a bed and well defined sides or banks beginning at a point on the Fred Biesemeier farm in Township 56 north of range 99 west 6th P. M., as shown on the map hereto attached and hereby referred to, said map being a map of the Garland Division Landowners of the Shoshone Reclamation Project; at the point marked in red ink by the letter "B", and flowing thence in an easterly and southerly direction for a distance of approximately three and one-half miles on and across said land of affiant; that the course of said branch is shown on said plat by a red line from the point marked by the letter "B" to the point marked by the letter "A" which latter point is on said land of affiant, and is where the said two branches of Bitter Creek join and flow thence in one stream in an easterly and southerly direction in a well defined channel to the Shoshone River; that water from the rains and melted snows accumulates in large quantities and descends periodically through said North Branch which consists of a well defined channel which the force of said water has made for itself, and which is the accustomed channel through which said water flows and has always flowed since the first of April, 1910, which is the time affiant took up his residence in Park County, Wyoming, up to the present time; that ever since affiant has been a resident of Park County, Wyoming, he has lived on a tract of farming land adjoining said land purchased from the state of Wyoming; that affiant has had occasion to measure during the irrigating season of each year since the year 1910 the amount of water flowing through said branches of Bitter Creek; that from March 1 until August 15 of each year since the year 1910, there has been sufficient water from the rains and melted snows to irrigate 640 acres of land, and each year since 1910, affiant has obtained sufficient water from Bitter

Creek to irrigate his aforesaid land, and affiant has irrigated said land each year since 1910 and raised crops of hay and grain on the same from the waters of Bitter Creek;

Affiant further deposes and says that the other branch of Bitter Creek is known as the South Branch of Bitter Creek or sometimes as Bitter Creek, which branch each year receives the rain waters and melted snows from land located in townships 55 north and 56 north of ranges 99 and 100 west of 6th P. M., said land constituting a water shed of approximately 22 square miles in extent; that said South Branch is a natural stream or watercourse, consisting of a well defined channel through its whole course, having a bed

and well defined sides or banks, beginning on the 76 George Bullock farm in township 55 north, range 99 west of 6th P. M. as shown on the aforesaid map and hereby referred to, at the point marked in red ink by the letter "C", and flowing thence in an easterly and northerly direction for a distance of approximately nine miles on and across said land of affiant; that the course of said South Branch is shown on the plat hereto attached by the point marked by the letter "C" to the point marked by the letter "A"; that water from the rains and melted snows accumulates in large quantities and descends periodically through said south branch which consists of a well defined channel which the force of said water has made for itself, and which is the accustomed channel through which said water flows, and has to [affiants] best knowledge and belief always flowed, and through which said water has always flowed since the year 1910 up to the present time; that from March 1, to August 16 of each year since the year 1910 sufficient water from rain and melted snow has flowed through said south branch to irrigate and raise a crop of grain or hay on over 640 acres of land, and that affiant has each year since the year 1910 obtained more than sufficient water from said south branch to irrigate his aforesaid described land;

Affiant further deposes and says that since the year 1910, up to the present time, and as affiant is informed and believes since the year 1908, Bitter Creek and the said two branches of Bitter Creek contained water the year round sufficient to irrigate and grow crops on 2,500 acres of land; that affiant refers to the flow of water in said branches of Bitter Creek through the headgates constructed by affiant; that said water comes first from the natural run-off of the water sheds heretofore described; second, water brought from the Shoshone River and applied upon land within the said water sheds for irrigating said land as part of the

Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water sheds into said branches, without any effort on the part of the United States of America during said time to recover or reclaim the same; and, third, water brought from the Shoshone River and applied upon land within the said water sheds of said branches for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in surface drains by the owners of the land so irrigated, and discharged into the channels of said branches for the purpose of ridding said land of the same, and without any effort thereafter on the part of the United States of America to recover or reclaim the same;

Affiant further says that prior to the year 1916, the United States of America refused to permit or allow the owners of land within the Shoshone Reclamation Project to divert any surface or drainage water that was once used for irrigation back to the laterals, irrigating ditches or irrigating canals of the Shoshone Reclamation Project.

Affiant further deposes and says that in the year 1915, he purchased an eighty acre tract of land described as the south one-half of the southeast quarter of section 36 or lot 37, township 56 north, range 99 west 6th P. M., and that in the same year he applied for a permit from the State Engineer to appropriate water from Bitter Creek to irrigate said land; that since the year 1915, affiant has irrigated and raised crops of hay and grain on said land every year to the present time; that water for irrigating said land was obtained by affiant from the aforesaid Bitter Creek.

Dated at Powell, Wyoming, this 24th day of August, A. D. 1918.

CHARLES GRANT CALDWELL.

Sworn to and subscribed before me this 24th day of August, 1918.

(Seal.)

A. C. SINCLAIR.

Notary Public.

My Commission

expires July 20, 1920.

78 Endorsed: Filed in the District Court on August 30, 1918.

79 (Affidavit of Earl Kysar on behalf of the
defendants.)

State of Wyoming, }
Park County. } ss.

Earl Kysar, being first duly sworn on his oath deposes and says: that he is 36 years of age and a resident of Park County, State of Wyoming;

That in the year 1907 he made homestead entry under the laws of the United States of a certain tract of land located within $1\frac{3}{4}$ miles of Bitter Creek, and within $1\frac{1}{2}$ miles of certain school land owned by Charles Grant Caldwell, said school land being more particularly described as the South Half of the Southeast quarter and the West Half of the Southwest quarter of Section 36 (or Lot Thirty-seven), in Township Fifty-six, North of Range 99 West, 6th P. M.

That affiant has resided on his said tract of land from the year 1907 continuously to the present time;

That affiant has during each year of his residence on his said tract of land up to the present time had occasion during all seasons of the year to notice the flow of water in Bitter Creek by reason of his close proximity to said Bitter Creek,

80 and from the further fact that affiant crossed and re-crossed several times each month in order to go to the Town of Powell, Wyoming, where affiant did most of his trading and purchasing;

That affiant had often noticed the flow of waters in said Bitter Creek from March 1, until the middle of August of each year from the year 1907 up to the present time;

Affiant further deposes and says that Bitter Creek is a natural stream or water-course, one branch of which is known and platted as the "north branch of Bitter Creek" and which branch each year receives the rain waters and melted snow from the slopes and foot hills of the Polecat Bench in Township 56 North, Range 99 west 6th P. M., that said branch is a natural water-course or natural stream beginning at a point on the Fred Biesemeier farm in Township 56 north, Range 99 west. 6th P. M. as shown on the map hereto attached and hereby referred to, at the point marked in red ink by the letter "B", and flows thence in a southerly and easterly direction for a distance of approximately three

and one-half miles on and across the said school land of said Caldwell; that the course of said branch is shown on said plat by the red line running from the point lettered "B" to the point marked "A" on said school land of Caldwell; that said branch consists of a definite channel through its whole course, having a bed and well defined sides or banks; that while affiant has lived on his said tract of land the rain water and snows from the surrounding land to the extent of approximately sixteen square miles descends periodically through said channel of said Branch; that said channel is as affiant has said well defined which the force of the water flowing through said channel has made for itself, and which is the accustomed channel through which said water flows, and has always flowed since affiant has resided in Park County, Wyoming;

That from March 1 to August 15 of each year that affiant has resided in Park County Wyoming sufficient water from rain and snow has come down said North Branch to irrigate and raise a crop of grain or hay on over one section of land.

Affiant further deposes and says that Bitter Creek has another branch sometimes called "Bitter Creek" or the "South Branch of Bitter Creek", and which branch
81 each year receives the rain waters and melted snows from land located in townships 55 and 56 north of Ranges 99 and 100 west of 6th P. M., said land constituting a watershed of approximately 22 square miles in extent; that said South Branch is a natural stream or water course, consisting of a definite channel through its whole course, having a bed and well defined sides or banks beginning on the George Bullock farm in township 55 north, Range 99 west of 6th P. M. as shown on the map hereto attached, and hereby referred to at the point marked in red ink by the letter "C" and flowing thence in an easterly and northerly direction for a distance of approximately nine miles on and across said school land of said Caldwell; that the course of said South Branch is shown on the plat hereto attached by the red line from the point marked by the letter "C" to the point marked by the letter "A"; that at the point marked on said map by the letter "A" the North Branch of Bitter Creek and the South Branch of Bitter Creek join and flow thence in an easterly and southerly direction in a well defined channel as shown by the line in red ink on said map to the Shoshone River; that water from the rains and melted snows accumulates in large quantities and descends periodically through

said South Branch which consists of a well defined channel which the force of the water has made for itself, and which is the accustomed channel through which said water flows and has to [affiants] best knowledge and belief always flowed and through which said water has always flowed since affiant has lived in Park County, Wyoming; that from March 1, to August 15 of each year that affiant has lived in Park County, Wyoming, sufficient water from rain and melted snows has flowed through said South Branch to irrigate and raise a crop of grain or hay on eight hundred acres of land;

Affiant further deposes and says that both the North Branch of Bitter Creek and the South Branch of Bitter Creek contains also water during the year round since affiant has lived in said Park County, Wyoming, that said water comes first from the natural run-off of the water sheds heretofore described; second, water brought from the Shoshone River and applied upon land within the said water-sheds for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into said branches, without any effort on the part of United States of America during said time to recover the same, and third, water brought from the Shoshone River and applied upon land within the water sheds of said branches of Bitter Creek for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in surface drains by the owners of the land so irrigated, and discharged into the channels of said branches for the purpose of ridding said land of the same, and without any effort thereafter on the part of the United States of America to recover the same;

Affiant further deposes and says that he is well acquainted with the said school land owned by said Caldwell, and that said Caldwell has since the year 1911 obtained more than sufficient water from said branches of Bitter Creek to irrigate and raise good crops on the said west half of the southwest quarter of section 36, township 56 north of range 99 west, 6th P. M., and has had more than sufficient water to irrigate and raise crops since the year 1916, the other school land owned by said Caldwell;

That the United States of America, prior to the year 1916, refused to permit or allow any surface drainage water or any percolating water caused by irrigation of land within the

That affiant had often noticed the flow of waters in said Bitter Creek from March 1, until the middle of August of each year from the year 1913 up to the present time;

85 Affiant further deposes and says that Bitter Creek is a natural stream or water-course, one branch of which is known and platted as the "north branch of Bitter Creek" and which branch each year receives the rain waters and melted snow from the slopes and foot hills of the Polecat Bench in Township 56 North, Range 99 west 6th P. M., that said branch is a natural water-course or natural stream beginning at a point on the Fred Biesemeier farm in Township 56 north, Range 99 west, 6th P. M. as shewn on the map hereto attached and hereby referred to, at the point marked in red ink by the letter "B", and flows thence in a southerly and easterly direction for a distance of approximately three and one-half miles on and across the said school land of said Caldwell; that the course of said branch is shown on said plat by the red line running from the point lettered "B" to the point marked "A" on said school land of Caldwell; that said branch consists of a definite channel through its whole course, having a bed and well defined sides or banks; that while affiant has lived on his said tract of land, the rain water and snows from the surrounding land to the extent of approximately sixteen square miles descends periodically through said channel of said Branch; that said channel is as affiant has said well defined which the force of the water flowing through said channel has made for itself, and which is the accustomed channel through which said water flows, and has always flowed since affiant has resided in Park County, Wyoming;

That from March 1 to August 15 of each year that affiant has resided in Park County Wyoming sufficient water from rain and snow has come down said North Branch to irrigate and raise each year a crop of grain or hay on over one section of land.

Affiant further deposes and says that Bitter Creek has another branch sometimes called "Bitter Creek" or the "South Branch of Bitter Creek", and which branch each year receives the rain waters and melted snows from land located in townships 55 and 56 north of Ranges 99 and 100 west of the 6th P. M., said land constituting a water shed of approximately 22 square miles in extent; that said South Branch is a natural stream or water course, consisting of

a definite channel through its whole course, having a bed and well defined sides or banks beginning on the George

86 Bullock farm in township 55 north, range 99 west of 6th P. M. as shown on the map hereto attached, and hereby referred to at the point marked in red ink by the letter "C" and flowing thence in an easterly and northerly direction for a distance of approximately nine miles on and across said school land of said Caldwell; that the course of said South Branch is shown on the plat hereto attached by the red line from the point marked by the letter "C" to the point marked by the letter "A"; that at the point marked on said map by the letter "A" the North Branch of Bitter Creek and the South Branch of Bitter Creek join and flow thence in an easterly and southerly direction in a well defined channel as shown by the line in red ink on said map to the Shoshone River; that water from the rains and melted snows accumulates in large quantities and descends periodically through said South Branch which consists of a well defined channel which the force of the water has made for itself, and which is the accustomed channel through which said water flows and has to [affiants] best knowledge and belief always flowed and through which said water has always flowed since affiant has lived in Park County, Wyoming; that from March 1, to August 15 of each year that affiant has lived in Park County, Wyoming, sufficient water from rain and melted snows has flowed through said South Branch to irrigate and raise a crop of grain or hay on eight hundred acres of land;

Affiant further deposes and says that both the North Branch of Bitter Creek and the South Branch of Bitter Creek contains also water during the year round since affiant has lived in said Park County, Wyoming, that said water comes first from the natural run-off of the water sheds heretofore described; second, water brought from the Shoshone River and applied upon land within the said watersheds for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into said branches, without any effort on the part of United States of America during said time to recover the same, and

87 third, water brought from the Shoshone River and applied upon land within the water sheds of said branches of Bitter Creek for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in surface drains by

the owners of the land so irrigated, and discharged into the channels of said branches for the purpose of ridding said land of the same, and without any effort thereafter on the part of the United States of America to recover the same;

Affiant further deposes and says that he is well acquainted with the said school land owned by said Caldwell, and that said Caldwell has since the year 1913 obtained more than sufficient water from said branches of Bitter Creek to irrigate and raise good crops on the said west half of the southwest quarter of section 36, township 56 north of range 99 west, 6th P. M., and has had more than sufficient water to irrigate and raise crops since the year 1916, the other school land owned by said Caldwell;

That the United States of America, prior to the year 1916, refused to permit or allow any surface drainage water or any percolating water caused by irrigation of land within the Shoshone Reclamation Project to be diverted to the laterals or canals of the irrigation system of the Shoshone Reclamation project.

Dated at Powell, Wyoming this 24th day of August, A. D. 1918.

JAMES E. TOWNSLEY.

Sworn to and subscribed before me this 24th day of August, A. D. 1918.

A. C. SINCLAIR,
Notary Public.

(Seal.)

My Commission
expires July 20, 1920.

Endorsed: Filed in the District Court on August 30, 1918.

88 (Affidavit of William Woodruff, on behalf of
the Defendants.)

State of Wyoming, } ss
Park County.

William Woodruff being first duly sworn, on his oath deposes and says that he is 33 years of age, and a resident of Park County, Wyoming;

That he came to Park County, Wyoming, in the year 1904, and tended camp for the Bennett Creek Sheep Company;

that some years thereafter, to wit, in the year 1909, he left the employ of said company and immediately became foreman for the Hart Mountain Live Stock Company, and two years ago he became a partner of Paul Richter in the sheep business;

That as camp tender and foreman of said Bennett Creek Company and said Hart Mountain Live Stock Company he had charge of the ranging of all sheep of said companies; that both said companies ran their sheep in the fall and winter of each year on what is known as Polecat Bench in Park County, Wyoming, until the water on said Bench gave out, and then the sheep of said companies were ranged in townships 55 and 56 north of ranges 99 and 100 west of 6th P. M. which territory is now mostly within the Shoshone Reclamation Project; That said sheep of said companies were usually brought down from said Bench to the aforesaid townships and ranges the latter part of December or the first part of January of each year, and said sheep were

89 ranged in said townships and ranges as aforesaid described until the latter part of April or first of May of each year; That affiant was, while said sheep were fed on the land within the aforesaid townships and ranges, with the sheep at least once a week and often two or three days each week every year from 1904 until the last two or three years when affiant has been obliged to run his sheep on other lands by reason of the fact [the] the United States of America has reclaimed nearly all the land within said townships and ranges; that from the latter part of December or the first of January until the first of May of each year since 1904, the sheep over which affiant had the care of and control were ranged in the aforesaid townships and ranges and were watered from Bitter Creek; that during January, February, March and April of each year since 1904, there was a constant flow of water in said Bitter Creek unless said water was frozen; that affiant usually took his sheep first for range in the winter of each year to land about a mile west of school section 36, Township 56 North of Range 99 west of 6th P. M. through which flowed what was called the South Branch of Bitter Creek; that said Branch received the rain waters and snows, and possibly may have been fed by live springs from townships 55 and 56 north of ranges 99 and 100 west of 6th P. M., that said branch received the waters aforesaid from a water shed of large extent of approximately 20 square miles; that said branch was from the year 1904 to [affiants] knowledge a natural stream or water

course, having a definite channel through its whole course, having a bed and well defined banks; that water from the rains and snows and possibly from live springs accumulates in large quantities from January to May of each year, and descends annually during said time through said south branch (unless the waters were frozen); Said South Branch has a well defined channel which the force of the water has made for itself, and which is the accustomed channel through which said water has always flowed since the year 1904, and to the best knowledge and belief of affiant has always flowed; that said south branch of Bitter Creek rises in
90 township 55 north of range 99 west of 6th P. M. and extends in a northerly and easterly direction over and across the Shoshone Reclamation Project and joins what is known as the North Branch of Bitter Creek near or on the aforesaid school section; that said North Branch has its headwaters in township 56 north of range 99 west, of 6th P. M. and extends in a southerly and easterly direction until it joins South branch of Bitter Creek as aforesaid; that said North Branch received the rain waters and waters from melted snow and possibly from live springs from a watershed of approximately 15 square miles; that said North Branch is a water course or natural stream, having a definite channel through its whole course, possessing a well defined bed and banks; that said water from the rains and snows and possibly from live springs accumulates in large quantities and descends annually through said north branch; that said branch was from the year 1904 to [affiants] knowledge a natural stream or watercourse, that from January until May of each year from 1904 water descends annually during said time through said North Branch through a well defined channel which said water has made for itself, and which is the accustomed channel through which said water has always flowed since the year 1904, and to the best knowledge and belief of affiant has always flowed.

Affiant deposes and says that while affiant was with a band of sheep under his care and control either in March or April of the year 1912, and while said sheep were being pastured about a mile west of the aforesaid school section and on the north branch of Bitter Creek, there were two or three days in said month when the volume of water in said creek was so great that affiant lost fifty or sixty sheep by drowning in said north branch;

That enough waters came down each year since the year 1904 in the north branch of Bitter Creek and in the South

Branch of said Creek to irrigate two or more sections of land or over 1,200 acres of land;

Dated at Powell, Park County, Wyoming, this 24th day of August, 1918.

WILLIAM WOODRUFF.

91 Sworn to and subscribed before me this 24th day of August, A. D. 1918.

G. B. KERPER, JR.
Notary Public.

My commission expires Jan. 6, 1921.

(Seal.)

Endorsed: Filed in the District Court on August 30, 1918.

92

Copy of

Western Union Telegram

Received at 217 West 17th St., Cheyenne, Wyo.

37D Br 22/ Govt

Helena Mont 928A Sept 6 1918

Rigdon

US Attorney Cheyenne Wyo

Your telegram fourth chief counsel approves and authorizes entering into stipulation as stated please proceed accordingly

EGGESTON
941 AM

93

(Stipulation as to payment of damages to defendant Caldwell.)

It is hereby stipulated by the plaintiff that if it shall be determined upon final hearing that the defendant, Caldwell, is entitled to any damages because of the acts of the plaintiff, then and in that case the plaintiff will pay all damages defendant may suffer by virtue of such acts, or deliver to

the defendant such amount of water as it may be determined upon final hearing the defendant is entitled to receive.

UNITED STATES OF AMERICA,
Plaintiff,

By C. L. RIGDON

Its Attorney.

The above stipulation is hereby approved and agreed to by defendant Charles Grant Caldwell.

CHARLES GRANT CALDWELL,
By CLARK & HAGGARD,
His Attorneys.

Endorsed: Filed in the District Court on September 16, 1918.

94 (Order overruling motion to dissolve Injunction
Order of July 9, 1918, etc.)

This cause comes on now to be heard upon a stipulation of counsel for the parties hereto, and upon consideration thereof, it is ordered by the Court that the motion to dissolve injunction order entered herein on July 9, 1918, and the motion for the restraining order, be, and the same are hereby overruled and denied.

JOHN A. RINER,
Judge.

Endorsed: Filed in the District Court on September 16, 1918.

94a (Order granting Christopher Althoff and others
leave to Intervene as parties defendants
and to file answers, etc.)

The petitions of Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E. Townsley and Agnes H. Caldwell for leave to intervene as defendants and to file answers and counter-claims in the above entitled cause having been presented to the court and the same having been considered by the court

and no objection thereto having been interposed by the plaintiff, it is now

Ordered, that said petitioners be allowed to intervene in said cause as parties defendant and to file answers and counterclaims to the bill of complaint in said cause.

Done in open court this 28th day of January, 1919.

JOHN A. RINER,
Judge.

Endorsed: Filed in the District Court on January 28, 1919.

95 Separate Answer of Christopher Althoff.

United States of America,

Plaintiff,

v.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis and Christopher Althoff,
Defendants.

Christopher Althoff, for his separate answer to the above named plaintiff's bill of complaint filed herein, alleges:

I.

1. That he is a citizen and resident of the state of Wyoming.

2. Admits that, pursuant to the Act of Congress of June 17, 1902, and acts amendatory thereof, plaintiff has constructed and is now operating and maintaining an irrigation system located in the counties of Park and Big Horn, in the State of Wyoming, known as the Shoshone Irrigation Project, but alleges that he is without knowledge as to the extent of plaintiff's alleged withdrawal of land from entry in said counties in connection therewith; admits that plaintiff has constructed drainage ditches for the purpose of relieving large areas of water-logged and seepage lands from the water therein and thereon, and that plaintiff permitted the waste and seepage waters to escape from such lands by natural percolation and through said drainage ditches into the natural channel of Bitter Creek, but denies that such drainage ditches were constructed pursuant to the provisions of any Act of Congress, and denies that they were constructed with

96 the purpose of diverting said waters to the canals of said system to be used upon other lands in the regular course of the reclamation thereof, or that said waters were permitted to escape into said Bitter Creek with any intention on the part of plaintiff to reclaim said waters or to utilize them as a part of said irrigation system, but alleges that plaintiff has abandoned said waste and seepage waters, and the same have become tributary to said Bitter Creek, and alleges that plaintiff has never notified the State Engineer of Wyoming, or the water commissioner of the district where said water is to be used, of its desire to use the bed of said Bitter Creek for the purpose of carrying the water of said irrigation project; denies that plaintiff has the lawful right to divert said waters to the canals of its said irrigation system to be used upon other lands in the regular course of the reclamation thereof, or to prevent the continued escape of said waters into the channel of Bitter Creek; denies that said Bitter Creek is a dry wash, but alleges the fact to be that said Bitter Creek is and at all times has been a natural stream and water course with an established water shed and with a well-defined channel with a regular flow of water therein; that heretofore and on or about the month of December, 1910, plaintiff fully recognized the character of Bitter Creek as a natural stream and water course by making application to the State Engineer of Wyoming in writing for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest Corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land; admits that plaintiff has deepened and threatens to still further deepen said Bitter Creek, but denies that it has any right or authority so to do, and denies

97 that there is any necessity therefor, but alleges that the channel of said creek in its natural condition is of such depth and fall that it furnishes an ample outlet for the drainage of all the lands within its watershed.

3. That he is the owner of the Northwest Quarter and the East Half of the Southwest Quarter of Section 36 (or Lot

37) in Township 56, Range 99, in Park County, Wyoming, but denies that said lands were acquired by him under the Act of June 17, 1902, or subject to the Act of August 30, 1890, or that there has been reserved to the United States a right of way thereon for ditches and canals, and denies that plaintiff has any right or authority to go upon said land or to construct ditches or canals thereon.

4. Denies that he has interfered with the development of said project or has stopped the work of plaintiff upon that portion of said project where said drain line is being constructed, or that he has occasioned plaintiff any damage or expense, and denies that the further lawful progress of the work of constructing, operating and maintaining said irrigation system will be interfered with unless he be enjoined from interfering with plaintiff in constructing ditches and canals upon his land, and deepening the channel of said Bitter Creek on and above his said land.

II.

Further answering said bill of complaint, and by way of counterclaim, this defendant alleges:

1. That he is and at all times alleged in said bill was the owner in fee of the Northwest Quarter and the East Half of the Southwest Quarter of Section 36 (or Lot 37) in Township 56, Range 99 West of the 6th Principal Meridian in Park County, Wyoming, which said lands he acquired by purchase from the State of Wyoming under and by virtue of the statutes of the State of Wyoming, providing for the sale of the school lands belonging to said state.

98 2. That Bitter Creek is a natural stream and water course in Park County, Wyoming, having an established water shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910, water from the following sources; first, the natural run-off of the water shed of the said Bitter Creek; second, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into the said Bitter Creek, without any effort on the part of plaintiff during said time to recover or reclaim the same; third, water brought from the Shoshone River and applied upon land within the Bitter Creek water

shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in drains by plaintiff and discharged into the channel of said Bitter Creek for the purpose of ridding said land of the same, and without any effort thereafter on the part of plaintiff to recover or reclaim the same.

3. That on or about December 10, 1910, plaintiff fully recognized that said Bitter Creek was a natural stream and water course, and that the waters flowing therein from the sources as above alleged were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming, in writing, for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C", with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest corner of Lot Forty-one (41), Township
99 Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land, both of which said applications so made by plaintiff were denied and refused by the State Engineer of Wyoming.

4. That on June 10, 1915, this defendant obtained from the State Engineer of Wyoming permits to appropriate water from said Bitter Creek through ditches described as Enlargement of Caldwell Ditch No. 1 and Enlargement of Caldwell Ditch No. 2, for the purpose of irrigating the above described land.

5. That pursuant to said permits defendant has at all times since the date of said permits appropriated from said Bitter Creek through said ditches sufficient water to irrigate his above described lands for agricultural purposes, and has during all of said time cultivated all of said lands amounting to 240 acres, and used the same for raising agricultural crops.

6. That by reason of the facts hereinbefore alleged defendant has a right to the continued use of the waters of said Bitter Creek and to the continued diversion thereof at the above described diversion dams, which right is prior and superior to the right of plaintiff or of any other person to the use or diversion of said waters.

7. That plaintiff, pretending to be carrying out the work incident to the said irrigation project, but being without lawful right or authority so to do, threatens to deepen the channel of said Bitter Creek on and above defendant's lands in such a manner that all of the waters thereof will be diverted from his said headgates and diversion dams, and defendant thereby deprived of the use of the said waters to which he is rightfully entitled, and threatens to construct a ditch or ditches which will intercept said percolating water described in paragraph 2 of this counter-claim and the waters flowing in said drainage ditches as described in said paragraph 2, and thereby prevent the same from reaching the channel of said Bitter Creek above defendant's diversion dams and headgates as they have heretofore done and are now doing.

100 8. That the above described lands of defendant, if they receive the waters appropriated by defendant from Bitter Creek for the purpose of irrigating them, are worth at least \$250.00 per acre, and without said water are worth not to exceed \$10.00 per acre.

9. That plaintiff has gone upon defendant's above described land without right or authority so to do, and has constructed ditches and canals thereon and has excavated and deepened the channel of said Bitter Creek where it flows through said lands and has deposited upon said lands the earth removed from such ditches and canals and from the channel of Bitter Creek, and has by said acts destroyed and rendered unfit for agricultural purposes at least ten acres of said land, to defendant's damage in the sum of \$2400.00, and has by said acts injured and diminished the value of the remainder of said lands of defendant to the extent of \$80.00 per acre, thereby to the further damage of defendant in the sum of \$18,400.00.

10. That for all of said unlawful acts of plaintiff and its employees, agents and representatives, this defendant is without a plain, speedy and adequate remedy at law, and will suffer great and irreparable injury therefrom unless plaintiff, its agents, employees and representatives be enjoined and restrained by order of this Honorable Court from further proceeding with its said unlawful and unauthorized acts.

Wherefore, defendant prays that plaintiff be not granted the relief against this defendant prayed for in its bill of complaint, and that plaintiff, its agents, employees and rep-

representatives, be forthwith forever enjoined from doing or performing or continuing said threatened acts or any of them, and from doing, performing or continuing any acts which will divert said waters of Bitter Creek from the dams and headgates through which this defendant has appropriated same for the irrigation of his said lands, and from making any excavations through or upon defendant's lands and from depositing any excavated earth upon said lands;

101 that defendant have and recover from plaintiff his costs and disbursements in this action sustained, and that he have judgment against plaintiff for all the damages that he has suffered or may suffer up to the time of the determination of this suit by reason of plaintiff's unlawful acts, and that he have such other and further relief as to the court may seem just and equitable.

CLARK & HAGGARD

W. B. ROSS,

GEO. B. KERPER, Jr.

Attorneys for Defendant.

State of Wyoming, } ss.
County of Park.

CHRISTOPHER ALTHOFF, being first duly sworn, deposes and says that he is the above named answering defendant; that he has read the foregoing answer and counterclaim and that the facts therein set forth are true as he verily believes.

CHRISTOPHER ALTHOFF.

Subscribed and sworn to before me this 18th day of January, A. D. 1919.

A. C. SINCLAIR,
Notary Public.

(Seal).
My Commission expires
July 20, 1920.

Endorsed: Filed in the District Court on January 28, 1919.

102 Separate Answer of Arthur R. Thornburg.

United States of America,

Plaintiff,

vs.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff and
Arthur R. Thornburg,

Defendants.

Comes now Arthur R. Thornburg, and for his separate answer to the above named plaintiff's bill of complaint herein, alleges:

I.

1. That he is a citizen and resident of the state of Wyoming.

2. Admits that, pursuant to the Act of Congress of June 17, 1902, and acts amendatory thereof, plaintiff has constructed and is now operating and maintaining an irrigation system located in the counties of Park and Big Horn, in the State of Wyoming, known as the Shoshone Irrigation Project, but alleges that he is without knowledge as to the extent of plaintiff's alleged withdrawal of land from entry in said counties in connection therewith; admits that plaintiff has constructed drainage ditches for the purpose of relieving large areas of water-logged and seepage lands from the water therein and thereon, and that plaintiff permitted the waste and seepage waters to escape from such lands by natural percolation and through said drainage ditches into the natural channel of Bitter Creek, but denies that such drainage ditches were constructed pursuant to the provisions of any Act of Congress; and denies that they were constructed with the purpose of diverting
103 said waters to the canals of said system to be used upon other lands in the regular course of the reclamation thereof, or that said waters were permitted to escape into said Bitter Creek with any intention on the part of plaintiff to reclaim said waters or to utilize them as part of said irrigation system, but alleges that plaintiff has abandoned said waste and seepage waters, and the same have become tributary to said Bitter Creek, and alleges that plaintiff has never notified the State Engineer of Wyoming, or the water commissioner of the district where said water is to be used, of its desire to use the bed of said Bitter

Creek for the purpose of carrying the water of said irrigation project; denies that plaintiff has the lawful right to divert said waters to the canals of its said irrigation system to be used upon other lands in the regular course of the reclamation thereof, or to prevent the continued escape of said waters into the channel of Bitter Creek; denies that said Bitter Creek is a dry wash, but alleges the fact to be that said Bitter Creek is and at all times has been a natural stream and water course with an established water shed and with a well-defined channel with a regular flow of water therein; that heretofore and on or about the month of December, 1910, plaintiff fully recognized the character of Bitter Creek as a natural stream and water course by making application to the State Engineer of Wyoming in writing for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a head gate to be located in the Southwest Corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land; admits that plaintiff has deepened and threatens to still further
104 deepen said Bitter Creek, but denies that it has any right or authority so to do, and denies that there is any necessity therefor, but alleges that the channel of said creek in its natural condition is of such depth and fall that it furnishes an ample outlet for the drainage of all the lands within its watershed.

3. That he is the owner of the North Half of the Southeast Quarter of Section 36 (or Lot 37) in Township 56, Range 99, in Park County, Wyoming, but denies that said lands were acquired by him under the Act of June 17, 1902, or subject to the Act of August 30, 1890, or that there has been reserved to the United States a right of way thereon for ditches and canals, and denies that plaintiff has any right or authority to go upon said land or to construct ditches or canals thereon.

4. Denies that he has interfered with the development of said project or has stopped the work of plaintiff upon that portion of said project where said drain line is being con-

structed or that he has occasioned plaintiff any damage or expense, and denies that the further lawful progress of the work of constructing, operating and maintaining said irrigation system will be interfered with unless he be enjoined from interfering with plaintiff in constructing ditches and canals upon his land, and deepening the channel of said Bitter Creek on and above his said land.

II.

Further answering said bill of complaint, and by way of counterclaim, this defendant alleges:

1. That he is and at all times during the acts of plaintiff complained of was the owner in fee of the North Half of the Southeast Quarter of Section 36 (or Lot 37) in Township 56 North, Range 99 West of the 6th Principal Meridian in Park County, Wyoming, which said lands he acquired through mesne conveyances from the State of Wyoming under and by virtue of the statutes of the State of Wyoming providing for the sale of school lands belonging to said creek.

2. That Bitter Creek is a natural stream and water
105 course in Park County, Wyoming, having an established water shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910, water from the following sources; first, the natural run-off of the water shed of the said Bitter Creek; second, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into the said Bitter Creek, without any effort on the part of plaintiff during said time to recover or reclaim the same; third, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in drains by plaintiff and discharged into the channel of said Bitter Creek for the purpose of ridding said land of the same, and without any effort thereafter on the part of plaintiff to recover or reclaim the same.

3. That on or about December 10, 1910, plaintiff fully recognized that said Bitter Creek ~~was~~ a natural stream and water course, and that the waters flowing therein from the

sources as above alleged were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming, in writing, for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest Corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land, both of which said applications so made by plaintiff were denied and refused by the State Engineer of Wyoming.

4. That on June 10, 1915, C. G. Caldwell and D. H. Bagley obtained from the State of Wyoming permits to appropriate water from said Bitter Creek through ditches described as "Enlargement of Caldwell Ditch No. 1 and Caldwell Ditch No. 2," for the purpose of irrigating land including the above described land; that since said water rights were so secured this defendant has acquired title to said above described land together with the said water rights appurtenant thereto.

5. That pursuant to said permits defendant has at all times since the date of said permits appropriated from said Bitter Creek through said ditches sufficient water to irrigate his above described lands for agricultural purposes, and has during all of said time cultivated all of said lands amounting to 80 acres, and used the same for raising agricultural crops.

6. That by reason of the facts hereinbefore alleged defendant has a right to the continued use of the waters of said Bitter Creek and to the continued diversion thereof at the above described diversion dams, which right is prior and superior to the right of plaintiff or of any other person to the use or diversion of said waters.

7. That plaintiff, pretending to be carrying out the work incident to the said irrigation project, but being without lawful right or authority so to do, threatens to deepen the channel of said Bitter Creek on and above defendant's lands in such a manner that all of the waters thereof will be

diverted from his said headgates and diversion dams, and defendant thereby deprived of the use of the said waters to which he is rightfully entitled, and threatens to construct a ditch or ditches which will intercept said percolating water described in paragraph 2 of this counterclaim and the waters flowing in said drainage ditches as described in said paragraph 2, and thereby prevent the same from reaching the channel of said Bitter Creek above defendant's
107 diversion dams and headgates as they have heretofore done and are now doing.

8. That the above described lands of defendant, if they receive the waters appropriated by defendant from Bitter Creek for the purpose of irrigating them, are worth at least \$250.00 per acre, and without said water are worth not to exceed \$10.00 per acre.

9. That for all of said unlawful acts of plaintiff and its employees, agents and representatives, this defendant is without a plain, speedy and adequate remedy at law, and will suffer great and irreparable injury therefrom unless plaintiff, its agents, employees and representatives be enjoined and restrained by order of this Honorable Court from further proceeding with its said unlawful and unauthorized acts.

Wherefore, this defendant prays that plaintiff be not granted the relief prayed for in its bill of complaint; that plaintiff, its agents, employees and representatives be forthwith forever enjoined from doing or performing or continuing said threatened acts or any of them, and from doing, performing or continuing any acts which will divert said water of Bitter Creek from the dams and headgates through which this defendant has appropriated same for the purpose of irrigating his said lands; that defendant have and recover from plaintiff his costs and disbursements in this action sustained and that he have judgment against plaintiff for all of the damages he has suffered or may suffer up to the time of the determination of this suit by reason of plaintiff's unlawful acts, and that he have such other and further relief as to the court may seem just and equitable.

CLARK & HAGGARD,
W. B. ROSS.
GEO. B. KERPER, Jr.
Attorneys for Defendant.

108 State of Wyoming, }
County of Laramie } ss.

AVERY HAGGARD, being first duly sworn, on his oath deposes and says that he is one of the attorneys for the above named defendant; that he has read the foregoing answer and counterclaim and the facts therein set forth are true as he verily believes.

AVERY HAGGARD.

Subscribed and sworn to before me this 28th day of January, A. D. 1919.

THOMAS HUNTER
Notary Public.

(Seal)

Endorsed: Filed in the District Court on January 28, 1919.

109 Separate Answer of Earl Kysar and
D. E. Townsley.

United States of America,

Plaintiff,

v.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff,
Arthur R. Thornburg, Earl Kysar and
D. E. Townsley,

No. 984, Civil.

Defendants.

Come now Earl Kysar and D. E. Townsley, and for their separate answer to the above named plaintiff's bill of complaint herein, allege:

I.

1. That they are citizens and residents of the state of Wyoming.

2. Admit that, pursuant to the Act of Congress of June 17, 1902, and acts amendatory thereof, plaintiff has constructed and is now operating and maintaining an irrigation system located in the counties of Park and Big Horn, in the State of Wyoming, known as the Shoshone Irrigation Project, but allege that they are without knowledge as to the extent of

plaintiff's alleged withdrawal of land from entry in said counties in connection therewith; admit that plaintiff has constructed drainage ditches for the purpose of relieving large areas of water-logged and seepage lands from the water therein and thereon, and that plaintiff permitted the waste and seepage waters to escape from such lands by natural percolation and through said drainage ditches into the natural channel of Bitter Creek, but deny that such drainage ditches were constructed pursuant to the provisions of any Act of Congress, and deny that they were constructed with the purpose of diverting said waters to the canals of said system to be used upon other lands in the regular course of the reclamation thereof, or that said waters were permitted to escape into said Bitter Creek with any intention on the part of plaintiff to reclaim said waters or to utilize them as part of said irrigation system but allege that plaintiff has abandoned said waste and seepage waters, and the same have become tributary to said Bitter Creek, and allege that plaintiff has never notified the State Engineer of Wyoming, or the water commissioner of the district where said water is to be used, of its desire to use the bed of said Bitter Creek for the purpose of carrying the water of said irrigation project; deny that plaintiff has the lawful right to divert said waters to the canals of its said irrigation system to be used upon other lands in the regular course of the reclamation thereof, or to prevent the continued escape of said waters into the channel of Bitter Creek, deny that said Bitter Creek is a dry wash, but allege the fact to be that said Bitter Creek is and at all times has been a natural stream and water course with an established water shed and with a well-defined channel with a regular flow of water therein; that heretofore and on or about the month of December, 1910, plaintiff fully recognized the character of Bitter Creek as a natural stream and water course by making application to the State Engineer of Wyoming in writing for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest Corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest Corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large

111 body of land; admit that plaintiff has deepened and threatens to still further deepen said Bitter Creek, but deny that it has any right or authority so to do, and deny that there is any necessity therefor, but allege that the channel of said creek in its natural condition is of such depth and fall that it furnishes an ample outlet for the drainage of all the lands within its watershed.

3. Deny that they have interfered with the development of said project or have stopped the work of plaintiff upon that portion of said project where said drain line is being constructed, or that they have occasioned plaintiff any damage or expense, and deny that the further lawful progress of the work of constructing, operating and maintaining said irrigation system will be interfered with unless they be enjoined from interfering with plaintiff in constructing ditches and canals upon their land, and deepening the channel of said Bitter Creek on and above their said land.

II.

Further answering said bill of complaint, and by way of counterclaim, these defendants allege:

1. That defendant Kysar is and at all times during the acts of plaintiff complained of was the owner in fee of the North Half of the Northeast Quarter of Section 36 (Or Lot 37), and defendant Townsley is and at all times during the acts of plaintiff complained of was the owner in fee of the South Half of the Northeast Quarter of said Section 36 (or Lot 37), in Township 56 North, Range 99 West of the 6th Principal Meridian in Park County, Wyoming, which said lands they acquired through mesne conveyances from the State of Wyoming under and by virtue of the statutes of the State of Wyoming providing for the sale of school lands belonging to said creek.

2. That Bitter Creek is a natural stream and water course in Park County, Wyoming, having an established water shed and a well-defined channel in which there has been
112 flowing constantly at all times since prior to the year 1910, water from the following sources; first, the natural run-off of the water shed of the said Bitter Creek; second, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into the said Bitter

Creek, without any effort on the part of plaintiff during said time to recover or reclaim the same; third, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation project, and which water was thereafter collected in drains by plaintiff and discharged into the channel of said Bitter Creek for the purpose of ridding said land of the same, and without any effort thereafter on the part of plaintiff to recover or reclaim the same.

3. That on or about December 10, 1910, plaintiff fully recognized that said Bitter Creek was a natural stream and water course and that the waters flowing therein from the sources as above alleged were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming, in writing, for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest Corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land, both of which said applications so made by plaintiff were denied and refused by the State Engineer of Wyoming.

113 4. That on June 10, 1915, C. G. Caldwell and D. H. Bagley obtained from the State of Wyoming permits to appropriate water from said Bitter Creek through ditches described as "Enlargement of Caldwell Ditch No. 1 and Caldwell Ditch No. 2," for the purpose of irrigating land including the above described land; that since said water rights were so secured this defendant has acquired title to said above described land together with the said water rights appurtenant thereto.

5. That pursuant to said permits defendants have at all times since the date of said permits appropriated from said Bitter Creek through said ditches sufficient water to irrigate their above described lands for agricultural purposes, and have during all of said time cultivated all of said lands

amounting to 160 acres, and used the same for raising agricultural crops.

6. That by reason of the facts hereinbefore alleged defendants have a right to the continued use of the waters of said Bitter Creek and to the continued diversion thereof at the above described diversion dams, which right is prior and superior to the right of plaintiff or of any other person to the use or diversion of said waters.

7. That plaintiff, pretending to be carrying out the work incident to the said irrigation project, but being without lawful right or authority so to do, threatens to deepen the channel of said Bitter Creek on and above defendants' lands in such a manner that all of the waters thereof will be diverted from his said headgates and diversion dams, and defendants thereby deprived of the use of the said waters to which they are rightfully entitled, and threatens to construct a ditch or ditches which will intercept said percolating water described in paragraph 2 of this counterclaim and the waters flowing in said drainage ditches as described in said paragraph 2, and thereby prevent the same from reaching the channel of Bitter Creek above defendants' diversion dams and headgates as they have heretofore done and are now doing.

8. That the above described lands of defendants, if they receive the waters appropriated by defendants from
114 Bitter Creek for the purpose of irrigating them, are worth at least \$250.00 per acre, and without said water are worth not to exceed \$10.00 per acre.

9. That for all of said unlawful acts of plaintiff and its employees, agents and representatives, these defendants are without a plain, speedy and adequate remedy at law, and will suffer great and irreparable injury therefrom unless plaintiff, its agents, employees and representatives be enjoined and restrained by order of this Honorable Court from further proceeding with its said unlawful and unauthorized acts.

Wherefore, these defendants pray that plaintiff be not granted the relief prayed for in its bill of complaint; that plaintiff, its agents, employees and representatives be forthwith forever enjoined from doing or performing or continuing said threatened acts or any of them, and from doing, performing or continuing any acts which will divert said water of Bitter Creek from the dams and headgates through which these defendants have appropriated same for the purpose of

irrigating their said lands; that defendants have and recover from plaintiff their costs and disbursements in this action sustained and that they have judgment against plaintiff for all of the damages they have suffered or may suffer up to the time of the determination of this suit by reason of plaintiff's unlawful acts, and that they have such other and further relief as may to the court seem just and equitable.

CLARK & HAGGARD,
W. B. ROSS,
GEO. B. KERPER, Jr.,
Attorneys for Defendants.

115 State of Wyoming }
County of Laramie } ss.

AVERY HAGGARD, being first duly sworn, on his oath deposes and says that he is one of the attorneys for the above named defendants; that he has read the foregoing separate answer and counterclaim and the facts therein set forth are true as he verily believes.

AVERY HAGGARD

Subscribed and sworn to before me this 28 day of January,
A. D. 1919.

(Seal.) THOMAS HUNTER,
Notary Public.

Endorsed: Filed in the District Court on January 28, 1919.

116 Separate Answer of Agnes H. Caldwell.

United States of America, Plaintiff,

v.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff,
Arthur R. Thornburg, Earl Kysar and
D. E. Townsley and Agnes H. Caldwell, } No. 984, Civil.
Defendants.

Comes now Agnes H. Caldwell, and for her separate answer to plaintiff's bill of complaint filed herein, alleges:

I.

1. Admits that she is a citizen and resident of the State of Wyoming.

2. Admits that, pursuant to the Act of Congress of June 17, 1902, and acts amendatory thereof, plaintiff has constructed and is now operating and maintaining an irrigation system located in the counties of Park and Big Horn, in the State of Wyoming, known as the Shoshone Irrigation Project, but alleges that she is without knowledge as to the extent of plaintiff's alleged withdrawal of land from entry in said counties in connection therewith; admits that plaintiff has constructed drainage ditches for the purpose of relieving large areas of water-logged and seepage lands from the water therein and thereon, and that plaintiff permitted the waste and seepage waters to escape from such lands by natural percolation and through said drainage ditches into the natural channel of Bitter Creek, but denies that such drainage ditches were constructed pursuant to the provisions of any Act of Congress, and denies that they were constructed with the purpose of diverting said waters to

117 the canals of said system to be used upon other lands in the regular course of the reclamation thereof, or that said waters were permitted to escape into said Bitter Creek with any intention on the part of plaintiff to reclaim said waters or to utilize them as a part of said irrigation system, but alleges that plaintiff has abandoned said waste and seepage waters, and the same have become tributary to said Bitter Creek, and alleges that plaintiff has never notified the State Engineer of Wyoming, or the water commissioner of the district where said water is to be used, of its desire to use the bed of said Bitter Creek for the purpose of carrying the water of said irrigation project; denies that plaintiff has the lawful right to divert said waters to the canals of its said irrigation system to be used upon other lands in the regular course of the reclamation thereof, or to prevent the continued escape of said waters into the channel of Bitter Creek; denies that said Bitter Creek is a dry wash, but alleges the fact to be that said Bitter Creek is and at all times has been a natural stream and water course with an established water shed and with a well-defined channel with a regular flow of water therein: that heretofore and on or about the month of December, 1910, plaintiff fully recognized the character of Bitter Creek as a natural stream and water course by making application to the State Engineer of Wyoming in writing for an irrigation permit to

divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest corner of Lot Eighty-one (81), Township Fifty-five (55), Range Ninety-nine (99), for the proposed irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest Corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land; admits that plaintiff has deepened and threatens to still further deepen said Bitter Creek, but denies that it has any right or authority so to do, and denies that there is any necessity therefor, but alleges that the channel of said creek in its natural condition is of such depth and fall that it furnishes an ample outlet for the drainage of all the lands within its watershed.

3. Admits that she is the owner of certain lands in Township Fifty-six (56), Range Ninety-nine (99), to-wit, the West Half of the Southwest Quarter of Section Thirty-six (or Lot 37) in said Township and Range, but denies that said lands were acquired by her under Act of June 17, 1902, or subject to Act August 30, 1890, or that there has been reserved to the United States a right of way thereon for ditches and canals, and denies that plaintiff has any right or authority to go upon said land or to construct ditches or canals thereon.

4. Denies that she has refused to allow or permit plaintiff to enter upon her said lands for the purpose of constructing said ditches, but admits that unless prevented by order of this court, she will refuse to allow or permit plaintiff so to do.

5. Denies that she has interfered with the development of said project or has stopped the work of plaintiff upon that portion of said project where said drain line is being constructed, or that she has occasioned plaintiff any damage or expense, and denies that the further lawful progress of the work of constructing, operating and maintaining said irrigation system will be interfered with unless she be enjoined from interfering with plaintiff in constructing ditches and canals upon her land, and deepening the channel of said Bitter Creek on and above her said land.

II.

Further answering said bill of complaint, and by way of counterclaim, this defendant alleges:

1. That she is and at all times alleged in said bill was the owner in fee of the West Half of the Southwest Quarter of Section Thirty-six (or Lot 37) in Township
119 Fifty-six (56), Range Ninety-nine (99) in Park County, Wyoming, which said lands she acquired by purchase from the State of Wyoming under and by virtue of the statutes of the State of Wyoming providing for the sale of the school lands belonging to said state.

2. That Bitter Creek is a natural stream and water course in Park County, Wyoming, having an established water shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910, water from the following sources; first, the natural run-off of the water shed of the said Bitter Creek; second, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water thereafter percolated through the soil of the said water shed into the said Bitter Creek, without any effort on the part of plaintiff during said time to recover or reclaim the same; third, water brought from the Shoshone River and applied upon land within the Bitter Creek water shed for the purpose of irrigating said land as a part of the Shoshone Reclamation Project, and which water was thereafter collected in drains by plaintiff and discharged into the channel of said Bitter Creek for the purpose of ridding said land of the same, and without any effort thereafter on the part of plaintiff to recover or reclaim the same.

3. That on or about December 10, 1910, plaintiff fully recognized that said Bitter Creek was a natural stream and water course and that the waters flowing therein from the sources as above alleged were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming, in writing, for an irrigation permit to divert the waters of said Bitter Creek through a certain proposed ditch described as "Lateral C," with its headgate to be located in the Northwest corner of Lot Eighty-one (81). Township
Fifty-five (55), Range Ninety-nine (99), for the proposed
120 irrigation of about 3,000 acres of land, and on or about the same date also applied for a permit to the

State Engineer of Wyoming to divert the waters of said stream through a proposed ditch described as "Lateral D," from a headgate to be located in the Southwest corner of Lot Forty-one (41), Township Fifty-six (56), Range Ninety-nine (99), for the proposed irrigation of a large body of land, both of which said applications so made by plaintiff were denied and refused by the State Engineer of Wyoming.

4. That on October 6, 1910, C. G. Caldwell obtained from the State Engineer of Wyoming permits to appropriate water from said Bitter Creek through ditches described as "Caldwell Ditch No. 1," and "Caldwell Ditch No. 2," for the purpose of irrigating the above described land; that since said water rights were so secured this defendant has acquired title to said above described land together with the said water rights appurtenant thereto.

5. That pursuant to said permits defendant constructed a diversion dam and headgate for said Caldwell Ditch No. 1, in said Bitter Creek at a point approximately N. 65° 45' W. 1334 feet from the Southwest corner of Lot 37, Township Fifty-six (56), Range Ninety-nine (99), and a diversion dam and head gate for said "Caldwell Ditch No. 2," in said Bitter Creek at a point approximately N. 59° W. 1341 feet from the Southwest corner of Lot Thirty-seven ([47]), Township Fifty-six (56), Range Ninety-nine (99), and has at all times since the date of said permits appropriated continuously from the waters of said Bitter Creek water to irrigate her above described lands for agricultural purposes, and has during all of said time cultivated all of said lands and used the same for raising agricultural crops.

6. That by reason of the facts hereinbefore alleged defendant has a right to the continued use of the waters of said Bitter Creek and to the continued diversion thereof at the above described diversion dams, which right is prior and superior to the right of plaintiff or of any other person to the use or diversion of said waters.

7. That plaintiff, pretending to be carrying out the
121 work incident to the said irrigation project, but being without lawful right or authority so to do, threatens to deepen the channel of said Bitter Creek on and above defendant's lands in such a manner that all of the waters thereof will be diverted from her said headgates and diversion dams, and defendant thereby deprived of the use of the said waters to which she is rightfully entitled, and threatens

to construct a ditch or ditches which will intercept said percolating water described in paragraph 2 of this counterclaim and the waters flowing in said drainage ditches as described in said paragraph 2, and thereby prevent the same from reaching the channel of said Bitter Creek above defendant's diversion dams and headgates as they have heretofore done and are now doing.

8. That the above described lands of defendant, if they receive the waters appropriated by defendant from Bitter Creek for the purpose of irrigating them, are worth at least \$250.00 per acre, and without said water are worth not to exceed \$10.00 per acre.

9. That plaintiff threatens to go upon defendant's said land, without right or authority so to do, and to construct ditches and canals thereon, and to excavate and deepen the channel of said Bitter Creek where it flows through said lands, and to deposit upon said lands the earth removed from such ditches and canals and from the channel of Bitter Creek, and that the construction of such ditches and canals and the deposit of the earth upon defendant's lands will destroy many acres of said lands and render them unfit for agricultural purposes, and will destroy the crops growing thereon, and will interfere with the proper cultivation and irrigation of the remainder of said lands.

10. That for all of said unlawful acts of plaintiff and its employees, agents and representatives, this defendant is without a plain, speedy and adequate remedy at law, and will suffer great and irreparable injury therefrom unless plaintiff, its agents, employees and representatives be enjoined and restrained by order of this Honorable Court from further proceeding with its said unlawful and unauthorized acts.

Wherefore, defendant prays that plaintiff be not granted the relief against this defendant prayed for in its bill of complaint, and that plaintiff, its agents, employees and representatives, be forthwith and forever enjoined from doing or performing or continuing any of said threatened acts and from doing or performing any acts which will divert the said waters of Bitter Creek from [defendants] dams and headgates, and from making any excavations through or upon defendant's lands and from depositing any excavated earth upon said land; that defendant have and recover from plaintiff [his] costs and disbursements in this action sustained, and that defendant have judgment against

plaintiff for all damages that [he] may suffer up to the time of the determination of this suit by reason of plaintiff's unlawful acts, and that defendant have such other and further relief as to the court may seem just and equitable.

CLARK & HAGGARD,
W. B. ROSS,
GEO. B. KERPER, Jr.
Attorneys for defendant.

State of Wyoming }
County of Laramie } ss.

AVERY HAGGARD, being first duly sworn, upon his oath deposes and says that he is one of the attorneys for the above named defendant; that he has read the foregoing answer and counterclaim and that the facts therein set forth are true as he verily believes.

AVERY HAGGARD.

Subscribed and sworn to before me this 28 day of January, A. D. 1919.

(Seal.) THOMAS HUNTER,
Notary Public.

123 Endorsed: Filed in the District Court on January 28, 1919.

125 Reply to the Separate Answer of Arthur W. Ide.

United States of America,

vs.

Plaintiff,

Arthur W. Ide, Charles Grant Caldwell
and H. B. Loomis,

Defendants.

No. 984 Civil.

Comes now the plaintiff, United States of America, leave of Court being first had, and replying to the separate answer and counter-claim of the defendant, Arthur W. Ide, says:

1. Admits that the defendant is the owner of the land described as "Farm Unit G," Lot Forty (40), Township Fifty-six (56), Range Ninety-eight (98), in Park County, Wyoming; admits that Bitter Creek runs through said land, but denies that said Bitter Creek is a natural stream, but alleges

that whatever water flows in the said Bitter Creek comes from the seep, drainage and percolating waters of the irrigated lands lying along its course; denies that any water rights have been appropriated or acquired by any persons or corporations from said Bitter Creek, or that any persons have the lawful right to the use of any water from Bitter Creek for the irrigation of their lands under any permits granted by the State of Wyoming.

2. Admits that plaintiff did go upon defendant's land and deepen and alter the channel of said Bitter Creek and construct a canal on said land, as alleged in said answer of defendant, but alleges that plaintiff had lawful right and authority so to do and that plaintiff had reserved to itself a right-of-way across said lands for the construction of said
ditches; denies that plaintiff entered upon any lands,
126 or used or occupied any lands of the defendant, except lands reserved to the plaintiff as a right-of-way for said ditches; denies that the construction of said ditches interferes with the irrigation and drainage of said defendant's land; denies that plaintiff deposited earth excavated from said ditches over and across defendant's land, but alleges that plaintiff deposited earth excavated from said ditches only upon the right-of-way for said ditches reserved to the plaintiff; denies that the reasonable value of said land is Two hundred fifty dollars (\$250.00) per acre, but alleges that the reasonable value of said land is Seventy dollars (\$70.00) per acre; admits that the reasonable value of the crops growing on said land is Forty dollars (\$40.00) per acre; denies that said excavation and work was unnecessary and unlawful, but alleges that said work was performed under authority of law and was necessary to the proper conduct, development and operation of said irrigation project; denies that said work caused defendant great injury or damage, or any injury or damage.

3. Denies that plaintiff recognized said Bitter Creek as a natural stream by making application to the State Engineer of Wyoming for an irrigation permit, as alleged in defendant's answer.

4. Denies that defendant suffered, or will suffer any injury from the acts of the plaintiff.

Wherefore, plaintiff prays that defendant's counter-claim be dismissed, and for judgment for its costs and such other relief as may be just and proper.

CHARLES L. RIGDON,
United States Attorney for the
District of Wyoming.

127 United States of America, } ss.
District of Wyoming.

CHARLES L. RIGDON, being first duly sworn, according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming; that he has read the above and foregoing reply and knows the contents thereof, and that the facts therein stated are true, as he verily believes.

CHARLES L. RIGDON.

Subscribed and sworn to before me this 29th day of January, A. D. 1919.

CHARLES J. OHNHAUS,
Clerk.

Endorsed: Filed in the District Court on January 29, 1919.

128 Reply to the Separate Answer of Charles Grant
Caldwell.

Comes now the plaintiff, United States of America, leave of Court being first had, and replying to the separate answer and counter-claim of the defendant, Charles Grant Caldwell, says:

1. Admits that the defendant is the owner of the South half of the Southeast quarter ($S\frac{1}{2}SE\frac{1}{4}$), and the West half of the Southwest quarter ($W\frac{1}{2}SW\frac{1}{4}$), of Section Thirty-six (36), (or Lot Thirty-seven), in Township Fifty-six (56), Range Ninety-nine (99) West of the Sixth Principal Meridian, in Park County, Wyoming, which said land defendant acquired by purchase from the State of Wyoming, under and by virtue of the statutes of the [States] of Wyoming providing for the sale of school lands belonging to said State, and plaintiff alleges that by virtue of Section 3890 Compiled Statutes of Wyoming, 1910, there was granted to the United States over said land a right-of-way for said ditch constructed by and under the authority of the United States, and that there was reserved to the United States in the contract of sale to said defendant, and in the conveyance from the State of Wyoming to said defendant the right-of-way for said ditch, and that said land was acquired by said defendant subject to an appropriation of water made by the

129 United States and a permit issued by the State Engineer of the State of Wyoming for the irrigation of all said land, among other lands; that said land is included within the terms of the Act of Congress of June 17, 1902, and acts amendatory thereof, and that upon compliance by the defendant with the terms and conditions of said acts of Congress, the defendant is entitled to demand the delivery of the water appropriated for the irrigation of said land.

2. Denies that Bitter Creek is a natural stream and water course having an established water-shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910 water, as alleged in said answer and counter-claim, but alleges the fact to be that Bitter Creek is not a natural stream and water course, but a number of dry washes and gullies, and that there was no water running in said Bitter Creek prior to the year 1908; that prior to the year 1908 Bitter Creek had no permanent or natural source and no defined course or banks; that in the year 1908 irrigation of the lands in the Garland Division of the Shoshone Project was begun and that since said time there has been a constant flow of water in said Bitter Creek from the waste, seepage and drainage waters produced by said irrigation; that said Bitter Creek has no natural run-off of water, except from infrequent rains and snows, and that the water produced from said rains and snows is and at all times has been insufficient to produce a flow of water in said Bitter Creek; denies that no effort has been made by plaintiff to recover and reclaim said seep, percolating, waste and drainage waters.

3. Denies that plaintiff recognized said Bitter Creek as a natural stream and water course, or recognized that the waters flowing therein from the sources alleged in defendant's answer were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming for an irrigation permit, as alleged in defendant's answer.

130 4. Denies that defendant on June 10, 1915, obtained from the State Engineer of Wyoming permission to appropriate water from said Bitter Creek, as alleged in paragraph four of defendant's answer, but alleges that said pretended permits are void and of no effect and issued without authority of law, and that defendant could acquire no rights under said pretended permits as against the United

States, and alleges that there was no water in Bitter Creek subject to appropriation by defendant, and that no appropriation could be made by or in accordance with the terms of said pretended permits.

5. Denies that defendant has at all times since the date of said pretended permits appropriated from said Bitter Creek sufficient water to irrigate the lands of defendant, and denies that defendant has during all of said times cultivated said lands, or any lands, under said pretended permits, but alleges that whatever water was taken from said Bitter Creek by defendant was taken without right and without authority of law.

6. Denies that defendant has a right to the continued use of waters of said Bitter Creek and to the continued diversion thereof at the diversion dams described in said answer, or that defendant has any right to the use of any water from said Bitter Creek under such pretended permits, or otherwise, and denies that said right of the defendant is prior and superior to the right of the plaintiff.

7. Denies that the plaintiff threatens to deepen the channel of Bitter Creek on and above defendant's lands in such manner that all of the waters thereof will be diverted from said headgate and diversion dams; but alleges the fact to be that plaintiff rightfully and in accordance with law has deepened Bitter Creek for the purpose of draining and reclaiming large bodies of land including the land of the defendant, and that the waters collected by the plaintiff in said Bitter Creek will be diverted from defendant's headgate and diversion dams; admits that the plaintiff has constructed certain ditches which intercept the percolating waters and waters flowing in said drainage ditches, as described
131 in defendant's answer, and prevents the same from reaching the channel of Bitter Creek above defendant's diversion dams and headgates, and alleges that said ditches have been constructed by plaintiff for the purpose of carrying the recaptured waste, seepage, drainage and percolating waters developed in the irrigation of said lands to other lands of the plaintiff in said irrigation project for the irrigation thereof: denies that said land of the defendant is worth two hundred fifty dollars (\$250.00) per acre with said water right, but alleges that the value of an adequate and sufficient water right for said land does not exceed the sum of seventy dollars (\$70.00) per acre.

8. Denies that defendant suffered, or will suffer, any injury from the acts of the plaintiff.

Wherefore, plaintiff prays that defendant's counter-claim be dismissed, and for judgment for its costs, and such other relief as may be just and proper.

CHARLES L. RIGDON,
United States Attorney for the
District of Wyoming.

United States of America, }
District of Wyoming. } ss.

CHARLES L. RIGDON, being first duly sworn, according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming; that he has read the above and foregoing reply and knows the contents thereof, and that the facts therein stated are true, as he verily believes.

CHARLES L. RIGDON.

Subscribed and sworn to before me this 29th day of January, A. D. 1919.

CHARLES J. OHNHAUS, Clerk.

132 Endorsed: Filed in the District Court on January 29, 1919.

133 Reply to the Separate Answer of Christopher Althoff.

United States of America,	Plaintiff,	} No. 984 Civil.
vs.		
Arthur W. Ide, Charles Grant Caldwell, H. B. Loomis and Christopher Althoff,	Defendants.	

Comes now the plaintiff, United States of America, leave of Court being first had, and replying to the separate answer and counter-claim of the defendant, Christopher Althoff, says:

1. Admits that the defendant is the owner of the Northwest quarter (NW $\frac{1}{4}$) and the East half of the Southwest

quarter (E $\frac{1}{2}$ SW $\frac{1}{4}$), of Section Thirty-six (36), (or Lot Thirty-seven), in Township Fifty-six (56), Range Ninety-nine (99) West of the Sixth Principal Meridian, in Park County, Wyoming, which said land defendant acquired by purchase from the State of Wyoming, under and by virtue of the statutes of the State of Wyoming providing for the sale of school lands belonging to said State, and plaintiff alleges that by virtue of Section 3890 Compiled Statutes of Wyoming, 1910, there was granted to the United States over said land a right-of-way for said ditch, constructed by and under the authority of the United States, and that there was reserved to the United States in the contract of sale to said defendant, and in the conveyance from the State of Wyoming to said defendant the right-of-way for said ditch, and that said land was acquired by said defendant subject to an appropriation of water made by the United States and a permit issued by the State Engineer of the State of Wyoming for the irrigation of all said land, among other lands; that said land is included within the terms of the Act of Congress of June 17, 1902, and acts amendatory thereof, and that upon compliance by the defendant with the terms and conditions of said acts of Congress, the defendant is entitled to demand the delivery of the water appropriated for the irrigation of said land.

2. Denies that Bitter Creek is a natural stream and water course having an established water-shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910 water, as alleged in said answer and counter-claim, but alleges the fact to be that Bitter Creek is not a natural stream and water course, but a number of dry washes and gullies, and that there was no water running in said Bitter Creek prior to the year 1908; that prior to the year 1908 Bitter Creek had no permanent or natural source and no defined course or banks; that in the year 1908 irrigation of the lands in the Garland Division of the Shoshone Project was begun and that since said time there has been a constant flow of water in said Bitter Creek from the waste, seepage and drainage waters produced by said irrigation; that said Bitter Creek has no natural run-off of water, except from infrequent rains and snows, and that the water produced from said rains and snows is and at all times has been insufficient to produce a flow of water in said Bitter Creek; denies that no effort has been made by plaintiff to recover and reclaim said seep, percolating, waste and drainage waters.

3. Denies that plaintiff recognized said Bitter Creek as a natural stream and water course, or recognized that the waters flowing therein from the source alleged in defendant's answer were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming for an irrigation permit, as alleged in defendant's answer.

4. Denies that the defendant on June 10, 1915, obtained from the State Engineer of Wyoming permission to appropriate water from said Bitter Creek, as alleged in
135 paragraph four of defendant's answer, but alleges that said pretended permits are void and of no effect and issued without authority of law, and that defendant could acquire no rights under said pretended permits as against the United States, and alleges that there was no water in Bitter Creek subject to appropriation by defendant, and that no appropriation could be made by or in accordance with the terms of said pretended permits.

5. Denies that defendant has at all times since the date of said pretended permits appropriated from said Bitter Creek sufficient water to irrigate the lands of defendant, and denies that defendant has during all of said times cultivated lands amounting to two hundred forty (240) acres, or any lands, under said pretended permits, but alleges that whatever water was taken from said Bitter Creek by defendant was taken without right and without authority of law.

6. Denies that defendant has a right to the continued use of waters of said Bitter Creek and to the continued diversion thereof at the diversion dams described in said answer, or that defendant has any right to the use of any water from said Bitter Creek under such pretended permits, or otherwise, and denies that said right of the defendant is prior and superior to the right of the plaintiff.

7. Denies that the plaintiff threatens to deepen the channel of Bitter Creek on and above defendant's lands in such manner that all of the waters thereof will be diverted from said headgate and diversion dams, but alleges the fact to be that plaintiff rightfully and in accordance with law has deepened Bitter Creek for the purpose of draining and reclaiming large bodies of land including the land of the defendant, and that the waters collected by the plaintiff in said Bitter Creek will be diverted from defendant's headgate and diversion dams; admits that the plaintiff has con-

structed certain ditches which intercept the percolating waters and waters flowing in said drainage ditches, as described in defendant's answer, and prevents the same from reaching the channel of Bitter Creek above defendant's diversion dams and headgates, and alleges that said
 136 ditches have been constructed by plaintiff for the purpose of carrying the recaptured waste, seepage, drainage and percolating waters developed in the irrigation of said lands to other lands of the plaintiff in said irrigation project for the irrigation thereof; denies that said land of the defendant is worth two hundred fifty dollars (\$250.00) per acre with said water right, but alleges that the value of an adequate and sufficient water right for said land does not exceed the sum of Seventy dollars (\$70.00) per acre.

8. Denies that plaintiff entered upon defendant's land, described in said answer, without right or authority to do so, but alleges that plaintiff entered upon said land by virtue of a right-of-way reserved to the plaintiff under the statutes of the State of Wyoming and in the contract of sale and conveyance of said land to the defendant, and alleges that plaintiff entered upon, took and used only lands reserved to the use of the plaintiff, and denies that defendant was thereby injured in the sum of Twenty-four hundred dollars (\$2400.00), or in any sum, and denies that said acts of the plaintiff injured or diminished the value of the said land of the defendant to the extent of Eighty dollars (\$80.00) per acre, or to any extent, or at all.

9. Denies that defendant suffered, or will suffer, any injury from the acts of the plaintiff.

Wherefore, plaintiff prays that defendant's counter-claim be dismissed, and for judgment for its costs, and such other relief as may be just and proper.

CHARLES L. RIGDON,
 United States Attorney for the
 District of Wyoming.

137 United States of America, } ss.
 District of Wyoming.

CHARLES L. RIGDON, being first duly sworn, according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming; that he has read the above and foregoing reply and knows the contents

thereof, and that the facts therein stated are true, as he verily believes.

CHARLES C. RIGDON.

Subscribed and sworn to before me this 29th day of January, A. D. 1919.

CHARLES J. OHNHAUS, Clerk.

Endorsed: Filed in the District Court on January 29, 1919.

138 Reply to the Separate Answer of Arthur R.
 Thornburg.

United States of America,

Plaintiff,

vs.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff, and
Arthur R. Thornburg,

Defendants.

No. 984 Civil.

Comes now the plaintiff, United States of America, leave of court being first had, and replying to the separate answer and counter-claim of the defendant, Arthur R. Thornburg, says:

1. Admits that the defendant is the owner of the North half ($N\frac{1}{2}$) of the Southeast quarter ($N\frac{1}{2}SE\frac{1}{4}$), of Section Thirty-six (36), (or Lot Thirty-seven), in Township Fifty-six (56), Range Ninety-nine (99) West of the Sixth Principal Meridian, in Park County, Wyoming, which said land defendant acquired by purchase from the State of Wyoming, under and by virtue of the statutes of the State of Wyoming providing for the sale of school lands belonging to said State, and plaintiff alleges that by virtue of Section 3890 Compiled Statutes of Wyoming, 1910, there was granted to the United States over said land a right-of-way for said ditch constructed by and under the authority of the United States, and that there was reserved to the United States in the contract of sale to said defendant, and in the conveyance from the State of Wyoming to said defendant the right-of-way for said ditch, and that said land was acquired by said defendant subject to an appropriation of water made by the United States and a permit issued by the State En-

gineer of the State of Wyoming for the irrigation of all said land, among other lands; that said land is included
139 within the terms of the Act of Congress of June 17, 1902 and acts amendatory thereof, and that upon compliance by the defendant with the terms and conditions of said acts of Congress, the defendant is entitled to demand the delivery of the water appropriated for the irrigation of said land.

2. Denies that Bitter Creek is a natural stream and water course having an established water-shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910, water, as alleged in said answer and counter-claim, but alleges the fact to be that Bitter Creek is not a natural stream and water course, but a number of dry washes and gullies, and that there was no water running in said Bitter Creek prior to the year 1908; that prior to the year 1908 Bitter Creek had no permanent or natural source and no defined course or banks; that in the year 1908 irrigation of the lands in the Garland Division of the Shoshone Project was begun and that since said time there has been a constant flow of water in said Bitter Creek from the waste, seepage and drainage waters produced by said irrigation; that said Bitter Creek has no natural run-off of water, except from infrequent rains and snows, and that the water produced from said rains and snows is and at all times has been insufficient to produce a flow of water in said Bitter Creek; denies that no effort has been made by plaintiff to recover and reclaim said seep, percolating waste and drainage waters.

3. Denies that plaintiff recognized said Bitter Creek as a natural stream and water course, or recognized that the waters flowing therein from the sources alleged in defendant's answer were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming for an irrigation permit, as alleged in defendant's answer.

4. Denies that C. G. Caldwell and D. H. Bagley on June 10, 1915, obtained from the State Engineer of Wyoming permission to appropriate water from said Bitter Creek, as alleged in paragraph four of defendant's answer, but alleges
140 that said pretended permits are void and of no effect and issued without authority of law, and that defendant could acquire no rights under said pretended permits as against the United States, and alleges that there

was no water in Bitter Creek subject to appropriation by the said C. G. Caldwell and D. H. Bagley, or defendant, and that no appropriation could be made by or in accordance with the terms of said pretended permits.

5. Denies that defendant has at all times since the date of said pretended permits appropriated from said Bitter Creek sufficient water to irrigate the lands of defendant, and denies that defendant has during all of said times cultivated lands amounting to eighty (80) acres, or any lands, under said pretended permits, but alleges that whatever water was taken from said Bitter Creek by defendant was taken without right and without authority of law.

6. Denies that defendant has a right to the continued use of waters of said Bitter Creek and to the continued diversion thereof at the diversion dams described in said answer, or that defendant has any right to the use of any water from said Bitter Creek under such pretended permits, or otherwise, and denies that said right of the defendant is prior and superior to the right of the plaintiff.

7. Denies that the plaintiff threatens to deepen the channel of Bitter Creek on and above defendant's lands in such manner that all of the waters thereof will be diverted from said headgate and diversion dams, but alleges the fact to be that plaintiff rightfully and in accordance with law has deepened Bitter Creek for the purpose of draining and reclaiming large bodies of land including the land of the defendant, and that the waters collected by the plaintiff in said Bitter Creek will be diverted from defendant's headgate and diversion dams; admits that the plaintiff has constructed certain ditches which intercept the percolating waters and waters flowing in said drainage ditches, as described in defendant's answer, and prevents the same from reaching the channel of Bitter Creek above defendant's diversion dams and headgates, and alleges that said ditches

141 have been constructed by plaintiff for the purpose of carrying the recaptured waste, seepage, drainage and percolating waters developed in the irrigation of said lands to other lands of the plaintiff in said irrigation project for the irrigation thereof; denies that said land of the defendant is worth two hundred fifty (\$250.00) dollars per acre with said water right, but alleges that the value of an adequate and sufficient water right for said land does not exceed the sum of Seventy dollars (\$70.00) per acre.

8. Denies that defendant suffered, or will suffer any injury from the acts of the plaintiff.

Wherefore, plaintiff prays that defendant's counter-claim be dismissed, and for judgment for its costs, and such other relief as may be just and proper.

CHARLES L. RIGDON,
United States Attorney
for the District of Wyoming.

United States of America, }
District of Wyoming. } ss.

CHARLES L. RIGDON, being first duly sworn, according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming; that he has read the above and foregoing reply and knows the contents thereof, and that the facts therein stated are true, as he verily believes.

CHARLES L. RIGDON.

Subscribed and sworn to before me this 29th day of January, A. D. 1918.

CHARLES J. OHNHAUS, Clerk.

142 Endorsed: Filed in the District Court on January 29, 1919.

143 Reply to the Separate Answer of Earl Kysar
and D. E. Townsley.

United States of America, }
Plaintiff, }
vs. }

Arthur W. Ide, Charles Grant Caldwell, } No. 984 Civil.
H. B. Loomis, Christopher Althoff, }
Earl Kysar and D. E. Townsley, }
Defendants. }

Comes now the plaintiff, United States of America, leave of Court being first had, and replying to the separate answer and counter-claim of the defendants, Earl Kysar and D. E. Townsley, says:

1. Admits that the defendant Kysar is the owner of the North half of the Northeast quarter ($N\frac{1}{2}NE\frac{1}{4}$), and the

defendant Townsley is the owner of the South half of the Northeast ($S\frac{1}{2}NE\frac{1}{4}$), of Section Thirty-six (36), (or Lot Thirty-seven), in Township Fifty-six (56), Range Ninety-nine (99) West of the Sixth Principal Meridian, in Park County, Wyoming, which said land defendants acquired by purchase from the State of Wyoming, under and by virtue of the statutes of the State of Wyoming providing for the sale of school lands belonging to said State, and plaintiff alleges that by virtue of Section 3890 Compiled Statutes of Wyoming, 1910, there was granted to the United States over said land a right-of-way for said ditch constructed by and under the authority of the United States, and that there was reserved to the United States in the contracts of sale to said defendants, and in the conveyances from the State of Wyoming to said defendants the right-of-way for
144 said ditch, and that said land was acquired by said defendants subject to an appropriation of water made by the United States and a permit issued by the State Engineer of the State of Wyoming for the irrigation of all said land, among other lands; that said land is included within the terms of the Act of Congress of June 17, 1902, and acts amendatory thereof, and that upon compliance by the defendants with the terms and conditions of said acts of Congress, the defendants are entitled to demand the delivery of the water appropriated for the irrigation of said land.

2. Denies that Bitter Creek is a natural stream and water course having an established water-shed and a well-defined channel in which there has been flowing constantly at all times since prior to the year 1910 water, as alleged in said answer and counter-claim, but alleges the fact to be that Bitter Creek is not a natural stream and water course, but a number of dry washes and gullies, and that there was no water running in said Bitter Creek prior to the year 1908; that prior to the year 1908 Bitter Creek had no permanent or natural source and no defined course or banks; that in the year 1908 irrigation of the lands in the Garland Division of the Shoshone Project was begun and that since said time there has been a constant flow of water in said Bitter Creek from the waste, seepage and drainage waters produced by said irrigation; that said Bitter Creek has no natural run-off of water, except from infrequent rains and snows, and that the water produced from said rains and snows is and at all times has been insufficient to produce a flow of water in said Bitter Creek; denies that

no effort has been made by plaintiff to recover and reclaim said seep, percolating, waste and drainage waters.

3. Denies that plaintiff recognized said Bitter Creek as a natural stream and water course, or recognized that the waters flowing therein from the sources alleged in defendant's answer were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming
145 for an irrigation permit, as alleged in defendant's answer.

4. Denies that C. G. Caldwell and D. H. Bagley, on June 10, 1915, obtained from the State Engineer of Wyoming permission to appropriate water from said Bitter Creek, as alleged in paragraph four of defendant's answer, but alleges that said pretended permits are void and of no effect and issued without authority of law, and that defendants could acquire no rights under said pretended permits as against the United States, and alleges that there was no water in Bitter Creek subject to appropriation by defendants, and that no appropriation could be made by or in accordance with the terms of said pretended permits.

5. Denies that defendants have at all times since the date of said pretended permits appropriated from said Bitter Creek sufficient water to irrigate the lands of defendants, and denies that defendants have during all of said times cultivated lands amounting to one hundred sixty (160) acres, or any lands, under said pretended permits, but alleges that whatever water was taken from said Bitter Creek by defendants was taken without right and without authority of law.

6. Denies that defendants have a right to the continued use of waters of said Bitter Creek and to the continued diversion thereof at the diversion dams described in said answer, or that defendants have any right to the use of any water from said Bitter Creek under such pretended permits, or otherwise, and denies that said right of the defendants is prior and superior to the right of the plaintiff.

7. Denies that the plaintiff threatens to deepen the channel of Bitter Creek on and above defendant's lands in such manner that all of the waters thereof will be diverted from said headgate and diversion dams, but alleges the fact to be that plaintiff rightfully and in accordance with law has deepened Bitter Creek for the purpose of draining and re-

claiming large bodies of land including the land of the defendants, and that the waters collected by the plaintiff in said Bitter Creek will be diverted from defendants' headgate and diversion dams; admits that the plaintiff has constructed certain ditches which intercept the percolating waters and waters flowing in said drainage ditches, as described in defendants' answer, and prevents the same from reaching the channel of Bitter Creek above defendants' diversion dams and headgates, and alleges that said ditches have been constructed by plaintiff for the purpose of carrying the recaptured waste, seepage, drainage and percolating waters developed in the irrigation of said lands to other lands of the plaintiff in said irrigation project for the irrigation thereof; denies that said land of the defendants is worth two hundred fifty dollars (\$250.00) per acre with said water right, but alleges that the value of an adequate and sufficient water right for said land does not exceed the sum of Seventy dollars (\$70.00) per acre.

8. Denies that defendants suffered, or will suffer, any injury from the acts of the plaintiff.

Wherefore, plaintiff prays that defendants' counter-claim be dismissed, and for judgment for its costs, and such other relief as may be just and proper.

CHARLES L. RIGDON,

United States Attorney
for the District of Wyoming.

147 United States of America, } ss.
District of Wyoming.

CHARLES L. RIGDON, being first duly sworn, according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming; that he has read the above and foregoing reply and knows the contents thereof, and that the facts therein stated are true, as he verily believes.

CHARLES L. RIGDON.

Subscribed and sworn to before me this 29th day of January, A. D. 1919.

CHARLES J. OHNHAUS, Clerk.

Endorsed: Filed in the District Court on January 29, 1919.

148

Reply to the Separate Answer of
Agnes H. Caldwell.

United States of America,

Plaintiff,

vs.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff,
Arthur R. Thornburg, Earl Kysar,
D. E. Townsley and Agnes H. Cald-
well,

Defendants.

No. 984 Civil.

Comes now the plaintiff, United States of America, leave of Court being first had, and replying to the separate answer and counter-claim of the defendant, Agnes H. Caldwell, says:

1. Admits that the defendant is the owner of the West half of the Southwest quarter ($W\frac{1}{2}SW\frac{1}{4}$) of Section Thirty-six (36), (or Lot Thirty-seven), in Township Fifty-six (56), Range Ninety-nine (99) West of the Sixth Principal Meridian, in Park County, Wyoming, which said land defendant acquired by purchase from the State of Wyoming, under and by virtue of the statutes of the State of Wyoming providing for the sale of school lands belonging to said State, and plaintiff alleges that by virtue of Section 3890 Compiled Statutes of Wyoming, 1910, there was granted to the United States over said land a right-of-way for said ditch constructed by and under the authority of the United States, and that there was reserved to the United States in the contract of sale to said defendant, and in the conveyance from the State of Wyoming to said defendant the right-of-way for said ditch, and that said land was acquired by said defendant subject to an appropriation of water made by

149 the United States and a permit issued by the State Engineer of the State of Wyoming for the irrigation of all said land, among other lands; that said land is included within the terms of the Act of Congress of June 17, 1902, and acts amendatory thereof, and that upon compliance by the defendant with the terms and conditions of said acts of Congress, the defendant is entitled to demand the delivery of the water appropriated for the irrigation of said land.

2. Denies that Bitter Creek is a natural stream and water course having an established water-shed and a well-defined channel in which there has been flowing constantly at all

times since prior to the year 1910 water, as alleged in said answer and counter-claim, but alleges the fact to be that Bitter Creek is not a natural stream and water course, but a number of dry washes and gullies, and that there was no water running in said Bitter Creek prior to the year 1908; that prior to the year 1908 Bitter Creek had no permanent or natural source and no defined course or banks; that in the year 1908 irrigation of the lands in the Garland Division of the Shoshone Project was begun and that since said time there has been a constant flow of water in said Bitter Creek from the waste, seepage and drainage waters produced by said irrigation; that said Bitter Creek has no natural run-off of water, except from infrequent rains and snows, and that the water produced from said rains and snows is and at all times has been insufficient to produce a flow of water in said Bitter Creek; denies that no effort has been made by plaintiff to recover and reclaim said seep, percolating, waste and drainage waters.

3. Denies that plaintiff recognized said Bitter Creek as a natural stream and water course, or recognized that the waters flowing therein from the sources alleged in defendant's answer were subject to appropriation under and in accordance with the laws of the State of Wyoming, by making application to the State Engineer of Wyoming for an irrigation permit, as alleged in defendant's answer.

150 4. Denies that the defendant on June 10, 1915, obtained from the State Engineer of Wyoming permission to appropriate water from said Bitter Creek, as alleged in paragraph three of defendant's answer, but alleges that said pretended permits are void and of no effect and issued without authority of law, and that defendant could acquire no rights under said pretended permits as against the United States, and alleges that there was no water in Bitter Creek subject to appropriation by defendant, and that no appropriation could be made by or in accordance with the terms of said pretended permits.

5. Denies that defendant has at all times since the date of said pretended permits appropriated from said Bitter Creek sufficient water to irrigate the lands of defendant, and denies that defendant has during all of said times cultivated said land, or any lands, under said pretended permits, but alleges that whatever water was taken from said Bitter Creek by defendant was taken without right and without authority of law.

6. Denies that defendant has a right to the continued use of waters of said Bitter Creek and to the continued diversion thereof at the diversion dams described in said answer, or that defendant has any right to the use of any water from said Bitter Creek under such pretended permits, or otherwise, and denies that said right of the defendant is prior and superior to the right of the plaintiff.

7. Denies that the plaintiff threatens to deepen the channel of Bitter Creek on and above defendant's lands in such manner that all of the waters thereof will be diverted from said headgate and diversion dams, but alleges the fact to be that plaintiff rightfully and in accordance with law has deepened Bitter Creek for the purpose of draining and reclaiming large bodies of land including the land of the defendant, and that the waters collected by the plaintiff in said Bitter Creek will be diverted from defendant's headgate and diversion dams; admits that the plaintiff has constructed certain ditches which intercept the percolating waters and waters flowing in said drainage ditches as described in defendant's answer, and prevents the same from reaching the channel of Bitter Creek above defendant's diversion dam and headgates, and alleges that said ditches have been constructed by plaintiff for the purpose of carrying the recaptured waste, seepage, drainage and percolating waters developed in said irrigation project for the irrigation thereof; denies that said land of the defendant is worth two hundred fifty dollars (\$250.00) per acre with said water right, but alleges that the value of an adequate and sufficient water right for said land does not exceed the sum of Seventy dollars (\$70.00) per acre.

8. Denies that plaintiff entered upon defendant's land described in said answer, without right or authority to do so, but alleges that plaintiff entered upon said land by virtue of a right-of-way reserved to the plaintiff under the statutes of the State of Wyoming and in the contract of sale and conveyance of said land to the defendant, and alleges that plaintiff entered upon, took and used only lands reserved to the use of the plaintiff, and denies that defendant was thereby injured or damaged, and denies that said acts of the plaintiff injured or diminished the value of the said land of the defendant, to any extent, or at all.

9. Denies that defendant suffered, or will suffer, any injury from the acts of the plaintiff.

Wherefore, plaintiff prays that defendant's counter-claim be dismissed, and for judgment for its costs, and such other relief as may be just and proper.

CHARLES L. RIGDON,
United States Attorney for the
District of Wyoming.

152 United States of America, }
District of Wyoming. } ss.

CHARLES L. RIGDON, being first duly sworn according to law, upon his oath deposes and says: that he is the United States Attorney for the District of Wyoming; that he has read the above and foregoing reply and knows the contents thereof, and that the facts therein stated are true, as he verily believes.

CHARLES L. RIGDON.

Subscribed and sworn to before me this 29th day of January, A. D. 1919.

CHARLES J. OHNHAUS,
Clerk.

Endorsed: Filed in the District Court on January 29, 1919.

153 (Memorandum Opinion of the District Court,
November 20, 1919.)

United States of America }
vs. } No. 984, Civil.
Arthur W. Ide, et al. }

I have little trouble in finding that Bitter Creek, the stream in controversy, is a natural stream or water course. The evidence clearly shows that it is a channel having well defined bed and banks in which, independently of any seepage water brought into it from the plaintiff's ditches, it had regularly and in each year a flow of water which lasted up to sometime early in May, and from which the defendant Caldwell and others, by means of a dam across the creek were able to conserve and use for irrigation purposes. The testimony upon this subject was somewhat conflicting. The

evidence against this conclusion, however, is of a negative character, while that tending to support the view partakes of the character of affirmative testimony. Without taking up specifically the testimony of each witness for defendants, it will be sufficient to say that they all testified positively that water flowed in Bitter Creek each year from the time the snows commenced to melt in the spring to about May 1st; and also testified that the prevailing winter winds drives much snow into the Bitter Creek side of the bench, where it packs in the gullies and melts slowly in the spring. Mr. Caldwell, one of the defendants, who, it seemed to the court, was an eminently fair witness, testified to the effect that there was a continuous flow of water in Bitter Creek each spring up to about the 1st of May, which, as the evidence shows, was about the time the seepage water from the ditches of the Reclamation Service commenced to
154 affect the flow.

As stated in one of the cases cited by counsel: "If the face of the country is such as necessarily to collect in one body so large a quantity of water after heavy rains and the melting of large bodies of snow as to require an outlet, and if such water is regularly discharged through a well defined channel which the force of the water has made for itself, and which is the accustomed channel through which it flows and has flowed from time immemorial, such channel is an ancient, natural water course." Many authorities were cited in the arguments and the briefs of counsel, and I have examined all of them, but do not deem it necessary to here review them case by case, but I think the decided weight of authority tends to support the conclusions reached by the court. Neither do I think that the plaintiff has a right of way across the lands of the defendants which would entitle it to go upon the lands and make such excavations as the testimony shows were made in this case. The evidence shows that the defendant Ide owns a homestead consisting of Lot 41, Township 56, Range 98, [though] which Bitter Creek flows. The other defendants are the owners of separate portions of Section 36, or Lot 37, in Township 56, Range 99, which is referred to by the witnesses as a school section, and through the southern half of which, Bitter Creek flows. This section was purchased from the State of Wyoming. Eighty acres of it is owned by the defendant Caldwell, and since 1911 has been irrigated by water taken from Bitter Creek by what is designated in the record as Ditches No. 1 and No. 2, by virtue of appropriation permits from the State of Wyoming, dated October 6, 1910. Approximately all of the

remainder of this section was irrigated by water from the same source taken from enlargements of the ditches above mentioned by virtue of appropriation permits from the State of Wyoming, dated April 22, 1915. The defendant Caldwell also owns a homestead of 80 acres consisting of the E $\frac{1}{2}$ of the SE $\frac{1}{4}$ of section 38, Township 59, Range 99, through which Bitter Creek flows.

155 In the summer and fall of 1918, as shown by the evidence, the officers of the Shoshone Reclamation project excavated and deepened the channel of Bitter Creek to such an extent that the diversion dam and the headgates by means of which defendants, other than the defendant Ide, irrigated section 36, were destroyed, or rendered useless and the defendants were prevented from taking any water from Bitter Creek.

The plaintiff bases its right to proceed as it has, upon the Act of Congress approved July 17, 1902. Section 8 of that act provides as follows:

"That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use or distribution of water used in irrigation or any vested right acquiring thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any state or of the Federal Government or of any land owner, appropriator or user of water in, to, or from any interstate stream or waters thereof; provided, that the right to use the water acquired under the provisions of this act shall be appurtenant to the land irrigated and beneficial use shall be the basis, the measure, and the limit of the right."

As the court has already found that there was a regular flow of water in Bitter Creek annually in the springtime, and that this water was available to the defendants for irrigation purposes under permits issued by the State, we think that irrespective of the rights of the parties in the seepage and waste waters from the reclamation ditches, the defendants, by virtue of their appropriations from the State, have rights in the waters of Bitter Creek which it is the duty of the court to protect.

The defendants concede, as they must of course, that one who has appropriated or attempted to appropriate seepage

waters, either before or after reaching the natural water course, has no right to insist that the conditions which give rise to such seepage shall continue. It is further conceded that the well established rule is, that a party who has appropriated water for irrigation purposes can resort to all remedies necessary to prevent the escape of such waters prior to the time it was appropriated for the purpose
156 for which it was appropriated. In other words, the appropriator has the right to collect, by ditches or otherwise, any water which by seepage has escaped from his ditch or reservoir. But as counsel for the defendants suggests, I think a distinction must be drawn between the exercise of such right and an attempt to collect seepage water after the rights growing out of the original appropriation have been lost by a use of the waters for the purposes for which it was appropriated.

The cases of the United States vs. Rams Horn Ditch Co. and Fort Morgan Reservoir and Irrigation Co. vs. McCune et al. may well, under the facts as set forth in the record in those cases and the statute of the State of Nebraska, be distinguished from the case at bar.

The Government is not the owner of the lands through which these waters percolate, and makes no pretense to using them upon its lands, but is attempting, by collecting them in canals and drainage ditches, to transport and apply them upon other lands within the Reclamation Project. These waters have been sold to the owners of lands through which they percolate for irrigation purposes and applied to the land, not by the Government, but by the land owners. The Government has not acquired by appropriation the right to the waters of Bitter Creek nor to any of the waters tributary to that stream; and my study of the case leads me to the conclusion that no rights can be acquired to such waters except by a valid appropriation thereof under the laws of the State. But even if the above suggestions are not well taken, I think it is nevertheless true that the Government has lost its right to reclaim such water or to intercept its return to Bitter Creek, because at the time such water was applied to the land the Government abandoned all right to a further use of such water. A distinction must always be drawn between the abandonment of a water right and the abandonment of the water itself. While it is quite true that a mere non-user of a water right does not ordinarily indicate an abandonment of such right, I think the courts have quite

157 uniformly held that where the water itself is discharged and released without any manifested intention of reclaiming it such water may be said to be abandoned and become subject to a new appropriation as soon as it reaches a new water course.

The evidence in this case shows that water from the Shoshone Project was first applied to land within the Bitter Creek water shed for the purpose of irrigation in 1908. George O. Stanford, the engineer in charge of the project, testified that prior to 1910 the necessity of constructing a drainage system was not given much consideration and that the surveys and investigations were not started until 1912, and that the utilization of waste water was first given rather definite consideration in 1915, but further testified that the project officers put upon the land owners the obligation of getting rid of surplus waters from their own land; so that clearly there had been no thought by the Project officers of using this seepage water prior to 1915, and in the meantime the rights of these appropriators had attached.

And as further evidence that the plaintiff did not consider it owned the seepage water but that the same was subject to appropriation, it appears that as late as December, 1910, it made, through its officers in charge of the project, a formal application to the State Engineer for a permit to appropriate such waters.

As stated in *Kinney on Irrigation*, while the appropriator of water may turn it into a ravine or gulch, or may even turn it back into its original channel for the purpose of conveying it to the place where it is to be used, nevertheless, in order to take advantage of the right to use the channel of the stream for a part of a ditch there must be an intention to recapture it, otherwise the water belongs to other appropriators on the stream according to their priorities of rights, the water being treated as abandoned by the one who turned it into the stream.

The views thus briefly stated, dispose of the case in this court in favor of the defendants.

The evidence shows that the value of the school section and the Garland Townsite was at least \$150.00 per acre with the water rights such as the owners have been enjoying, but is practically worthless without the water.

158 The Court having found that these owners have valid appropriations from the State of water rights in Bitter Creek for the purpose of irrigating their lands, and that

these rights were destroyed, the Government would be liable under the stipulation to the owners of the lands for the full value thereof. If, however, the plaintiff elects to furnish the defendants water without cost, according to their appropriations, in lieu of compensation for the destruction of their water rights and depreciation in the value of the lands to be irrigated therefrom, may do so upon payment to the defendants for lands ruined by excavations, as follows: To the defendant Ide, for seven acres of land at the rate of \$150.00 per acre; To the defendant Thornburg, three acres at the rate of \$150.00 per acre; to the defendant Althoff, three acres at the rate of \$150.00 per acre; to Charles Grant Caldwell, five acres at the rate of \$150.00 per acre; to Agnes H. Caldwell, three acres at the rate of \$150.00 per acre, otherwise the bill of complaint will be dismissed and a decree entered upon the cross bills enjoining the plaintiff's officers and agents from interfering in any way with the defendants' appropriations and use of water by means of dams, ditches or other means of conveying water from Bitter Creek to be applied to their lands for irrigation purposes.

Endorsed: Filed in the District Court on November 20, 1919.

159

(Decree, Nisi, November 20, 1919.)

In the District Court of the United States
for the District of Wyoming.

United States of America,

Plaintiff,

vs.

Arthur W. Ide, Charles Grant Caldwell,
Christopher Althoff, Arthur R. Thorn-
burg, Earl Kysar, D. E. Townsley and
Agnes H. Caldwell,

Defendants.

} No. 984 Civil.

This cause came on to be heard at the November 1918 term and was argued by counsel and taken under advisement and upon consideration thereof, the court finds that Bitter Creek, the stream in controversy in this suit, is a natural water course; that defendants, Charles Grant Caldwell, Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E.

Townsley and Agnes H. Caldwell, held appropriations of water from said stream for the irrigation of lands owned by them comprising all of Section Thirty-six (36), also described as Lot Thirty-seven (37) in Township Fifty-six (56), Range Ninety-nine (99) in Park County, Wyoming, which water appropriation rights are prior and superior to any rights of plaintiff in or to any of the waters of said stream; that plaintiff has unlawfully excavated and deepened the channel of Bitter Creek to such an extent that the diversion dam and headgates of said defendants by means of which they diverted water from said stream and irrigated their said lands, were destroyed or rendered useless and defendants prevented from taking water from said stream for the irrigation of their said lands in said Section Thirty-six (36), of which eighty (80) acres is owned by Charles Grant Caldwell, eighty (80) acres by Agnes H. Caldwell, two hundred and forty (240) acres by Christopher Althoff, eighty (80) acres by Arthur R. Thornburg, eighty (80) acres by D. E. Townsley and eighty (80) acres by defendant, Earl Kysar, to the great damage of each of said defendants; that plaintiff has unlawfully and without right of way excavated and placed large quantities of waste material across the lands of defendants, Arthur W. Ide, Arthur R. Thornburg, Christopher Althoff, Charles Grant Caldwell and Agnes H. Caldwell, thereby destroying and rendering unproductive seven (7) acres of the land of defendant, Ide, three (3) acres of the land of defendant, Thornburg, three (3) acres of the land of defendant, Althoff, five (5) acres of the land of defendant, Charles Grant Caldwell, and three (3) acres of the land of defendant, Agnes H. Caldwell, all of which land was of the value of One Hundred and Fifty Dollars (\$150.00) per acre.

It is therefore ordered, adjudged and decreed pursuant to a stipulation on file, that defendant, Arthur W. Ide, do have and recover from plaintiff the sum of One Thousand and Fifty Dollars (\$1,050.00) with interest thereon from July 1st, 1918 at the rate of 8% per annum; that defendant, Arthur R. Thornburg, do have and recover from plaintiff the sum of Four Hundred and Fifty Dollars (\$450.00) with interest thereon from October 1st, 1918 at the rate of 8% per annum; that defendant, Christopher Althoff, do have and recover from plaintiff the sum of Four Hundred and Fifty Dollars (\$450.00) with interest thereon from October 1st, 1918 at the rate of 8% per annum; that defendant, Charles Grant Caldwell, do have and recover from plaintiff the sum of Seven Hundred and Fifty Dollars

(\$750.00) with interest thereon from October 1st, 1918 at the rate of 8% per annum; that defendant, Agnes H. Caldwell, do have and recover from plaintiff the sum of Four Hundred and Fifty Dollars (\$450.00) with interest thereon from October 1st, 1918 at the rate of 8% per annum.

161 It is further ordered, adjudged and decreed that if plaintiff shall within thirty (30) days from and after the date of this decree file herein its election to furnish each of the defendants, other than Arthur W. Ide, a perpetual water right for the irrigation of their lands in said Section Thirty-six (36), Township Fifty-six (56), Range Ninety-nine (99) and at the same time file therewith a proper instrument in writing, conveying without cost to each of said defendants, other than defendant, Arthur W. Ide, perpetual water rights for the irrigation of their respective holdings of land in an amount equal to their respective appropriations of water from Bitter Creek, as evidenced by their permits granted by the State of Wyoming, then said defendants shall be and are forthwith enjoined from interfering with the plaintiff's diversion and use of the waters of the said Bitter Creek. If plaintiff shall not file its election and instruments conveying water rights to defendants, as above provided, plaintiff's bill of complaint shall be dismissed and plaintiff and its officers, agents, employees and representatives forever enjoined from interfering in any way with the defendants' appropriation and use of the waters of said Bitter Creek for the purposes of irrigating their lands in said Section Thirty-six (36), and from constructing or maintaining any excavations, ditches or other works which shall destroy or interfere with the maintenance and use by defendants of such diversion dams, ditches and other means of conveying water from Bitter Creek, as may be necessary to convey water from Bitter Creek to be applied to their lands in said Section Thirty-six (36) for irrigation purposes in accordance with their appropriation permits from the State of Wyoming.

To which ruling and decree of the court the plaintiff, by counsel, then and there excepted.

Done in open court this 20th day of November 1919.

JOHN A. RINER,
Judge.

162 Endorsed: Filed in the District Court on November 20, 1919.

163 (Statement of plaintiff as to its election to furnish defendants with perpetual water rights, etc.)

United States of America,

vs.

Plaintiff,

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff,
Arthur R. Thornburg, Earl Kysar and
D. E. Townsley, and Agnes H. Cald-
well,

Defendants.

No. 984 Civil.

Now comes Charles L. Rigdon, United States Attorney for the District of Wyoming, solicitor for the plaintiff herein, and says that the plaintiff has not and does not intend to avail itself of the right under the order of the Court heretofore made to file its election to furnish defendants herein, other than Arthur W. Ide, with perpetual water rights for the irrigation of their lands, or to file any instrument, in writing, conveying to defendants, other than Arthur W. Ide, perpetual water rights for the irrigation of their respective holdings of land equal to their respective appropriations of water from Bitter Creek, as evidenced by their permits granted by the State of Wyoming.

CHARLES L. RIGDON,
Solicitor for Plaintiff.

164 The State of Wyoming, } ss.
County of Laramie.

CHARLES L. RIGDON, of lawful age, being first duly sworn, on his oath deposes and says: that he is the solicitor for the plaintiff in the above entitled cause and that the above and foregoing statement is true of his own knowledge.

CHARLES L. RIGDON.

Subscribed and sworn to before me this 26th day of March, A. D. 1920.

(Seal.) CHARLES J. OHNHAUS, Clerk,
By FLORENCE BRADLEY, Deputy.

Endorsed: Filed in the District Court on March 27, 1920.

(Final Decree, March 31, 1920.)

In the District Court of the United States
for the District of Wyoming.

United States of America,

Plaintiff,

vs.

Arthur W. Ide, Charles Grant Caldwell,
Christopher Althoff, Arthur R. Thorn-
burg, Earl Kysar, D. E. Townsley and
Agnes H. Caldwell,

Defendants.

No. 984 Civil.

It being made to appear to the court from the records thereof that on the 20th day of November, 1919, it entered its decree, which among other things provided: "That if plaintiff shall within thirty days from and after the date of this decree file herein its election to furnish each of the defendants, other than Arthur W. Ide, a perpetual water right for the irrigation of their lands in said section thirty-six (36), township fifty-six (56), range ninety-nine (99), and at the same time file therewith a proper instrument in writing, conveying without cost to each of said defendants, other than defendant Arthur W. Ide, perpetual water rights for the irrigation of their respective holdings of land in an amount equal to their respective appropriations of water from Bitter Creek, as evidenced by their permits granted by the State of Wyoming, then said defendants shall be and are forthwith enjoined from interfering with the plaintiff's diversion and use of the waters of the said Bitter Creek."

The decree further provided that upon the failure of the plaintiff to "file its election and instruments convey-
166 ing water rights to the defendants as provided in the decree, its bill of complaint shall be dismissed, and the plaintiff and its officers, agents, employees and representatives forever enjoined from interfering in any way with the defendants' appropriation and use of the waters of said Bitter Creek for the purposes of irrigating its lands in said section thirty-six (36), and from constructing or maintaining any excavations, ditches or other works which shall destroy or interfere with the maintenance and use by the defendants of such diversion dams, ditches and other means of conveying water from Bitter Creek, as may be necessary to convey water from Bitter Creek to be applied to their lands in said

section thirty-six (36) for irrigation purposes in accordance with their appropriation permits from the State of Wyoming."

It further appearing to the court by the affidavit of Charles L. Rigdon, United States Attorney, filed herein, that the plaintiff did not, within the thirty days after the date of the decree as directed therein, file its election to furnish the defendants, other than the defendant Arthur W. Ide, a perpetual water right for the irrigation of their lands in section thirty-six (36), township fifty-six (56), range ninety-nine (99), nor was there filed by the plaintiff a writing conveying, without cost to each of the defendants, other than the defendant Arthur W. Ide, the perpetual water rights for the irrigation of their lands as provided in said decree.

It is therefore ordered, adjudged and decreed by the court that the decree entered herein on the 20th day of November, 1919, became and shall stand as the final decree of this court in this case from and after the 20th day of December, 1919, the bill of complaint dismissed and the injunction provided in said decree against the plaintiff, its officers, agents, employes and representatives shall be and remain in full force and effect, as provided in said decree of November 20, 1919; to which ruling and decree of the court the plaintiff, by counsel, then and there excepted.

JOHN A. RINER, Judge.

167 Endorsed: Filed in the District Court on March 31, 1920.

168

Petition for Appeal.

United States of America,

Plaintiff,

v.

Arthur W. Ide, Charles Grant Caldwell,
H. B. Loomis, Christopher Althoff,
Arthur R. Thornburg, Earl Kysar,
D. E. Townsley, and Agnes H. Cald-
well,

Defendants.

In Equity,
No. 984. Civil.

To the Honorable John A. Riner, Judge of the District Court
of the United States for the District of Wyoming:

The above named plaintiff, The United States of America, feeling itself aggrieved by the decree made and entered in this cause on the 31st day of March, 1920, providing that the decree entered herein on the 20th day of November, 1919, became and shall stand as the final decree of this court in this case from and after the 20th day of December, 1919, dismissing the bill of complaint herein and making permanent the injunction against the plaintiff as provided in said decree of November 20, 1919, does hereby appeal from said decree to the Circuit Court of Appeals of the United States for the Eighth Circuit, for the reasons specified in the Assignment of Errors which is filed herewith; and the plaintiff prays that its appeal be allowed, and that citation issue as provided by law, and that a transcript of the record, proceedings and papers upon which said decree was based duly authenticated may be sent to the Circuit Court of Appeals of the United States for the Eighth Circuit.

169 This petitioner further prays that an order be entered allowing this appeal to be made without the filing of a bond by the United States.

Dated May 20, 1920.

CHARLES L. RIGDON,
United States Attorney,
Solicitor for Plaintiff.

Endorsed: Filed in the District Court on May 20, 1920.

170

(Assignment of Errors.)

And now, on the 20th day of May, 1920, comes the plaintiff, The United States of America, by its solicitor, Charles L. Rigdon, United States Attorney for the District of Wyoming, and says that the decree made and entered in this cause on the 31st day of March, 1920, providing that the decree entered herein on the 20th day of November, 1919, became and shall stand as the final decree of this Court in this case from and after the 20th day of December, 1919, dismissing the bill of complaint herein and making permanent the injunction against the plaintiff as provided in said decree of November 20, 1919, is erroneous and unjust to plaintiff for the reasons following:

1. The Court erred in finding and holding that the plaintiff has unlawfully and without right of way excavated and placed large quantities of waste material across the lands of defendants, Ide, Thornburg, Althoff, and the two Caldwells, thereby destroying and rendering unproductive certain specified areas of lands of the value of \$150.00 per acre.

171 2. The Court erred in finding and holding that the plaintiff has unlawfully excavated and deepened the channel of Bitter Creek to such an extent that the diversion dam and headgates of the defendants, by means of which they diverted water from Bitter Creek and irrigated their lands, were destroyed or rendered useless and defendants prevented from taking water from said stream for the irrigation of their lands to their great damage.

3. The Court erred in finding and holding that Bitter Creek is a natural water course and within the provisions of the Constitution and Statutes of the State of Wyoming applying to appropriations of water from natural streams.

4. The Court erred in finding and holding that defendants had water rights in Bitter Creek prior and superior to any rights of plaintiff in or to the waters of said stream.

5. The Court erred in finding and holding that defendants had water rights in Bitter Creek independent of waters therein arising from the reclamation works and water uses of the Shoshone Project.

6. The Court erred in finding and holding that defendants had any water rights in Bitter Creek.

7. The Court erred in finding and holding that the defendants had rights to the use of water owned, reserved and appropriated by the United States for beneficial use upon its Shoshone Project.

8. The Court erred in finding and holding that there had been no thought by the Project officers of the United States of using the seepage water in controversy prior to 1915, and that in the meantime the right of the defendant appropriators had attached.

9. The Court erred in finding and holding that the plaintiff had lost its right to the use of the surplus, waste, return flow and seepage waters in controversy herein.

10. The Court erred in finding and holding that the plaintiff had abandoned its surplus, waste, return flow and seepage water in controversy herein.

11. The Court erred in holding that the United States must comply with the water laws of the State of Wyoming and the rules and regulations of the water officials of the State of Wyoming in order to beneficially use water owned, reserved and appropriated by the United States for the Shoshone Project.

12. The Court erred in finding and holding that the plaintiff did not consider that it owned the seepage water in controversy, but that the same was subject to appropriation by reason of the fact that the plaintiff through its officers in charge of the project in December, 1910, had made a formal application to the State Engineer for a permit to appropriate such waters.

13. The Court erred in making a distinction between the right of an appropriator to collect by ditches or otherwise any water which by seepage has escaped from his ditch or reservoir and his right to collect and conserve waste and seepage water arising from the irrigation of the lands under his ditch for the purpose of further using the same upon other lands originally intended to be irrigated with water from his ditch.

14. The Court erred in finding, holding and decreeing that the defendants or any of them are entitled to any claim for damages by reason of the irrigation, drainage and diversion works constructed by the United States.

15. The Court erred in decreeing that the plaintiff's bill of complaint be dismissed.

16. The Court erred in decreeing that the injunction against plaintiff be made permanent.

17. The Court erred in decreeing that defendants or any of them have and recover any sum of money from the plaintiff.

Wherefore, plaintiff prays that the decree herein be reversed and that the District Court of the United States for the District of Wyoming be instructed to enter such
173 a decree as is prayed for by the plaintiff in its bill of complaint.

CHARLES L. RIGDON,

United States Attorney,
Solicitor for Plaintiff.

Endorsed: Filed in the District Court on May 20, 1920.

174

Order Allowing Appeal.

This cause coming on now to be heard this twentieth day of May, 1920, upon the petition of the plaintiff for an appeal to the United States Circuit Court of Appeals for the Eighth Circuit, and the Court being fully advised, doth hereby grant said petition and allow said appeal, without the filing of an appeal bond by the petitioner, The United States of America.

Dated May 20, 1920.

JOHN A. RINER,
Judge.

Endorsed: Filed in the District Court on May 20, 1920.

United States of America }
Eighth Judicial Circuit. } ss.

In the
United States Circuit Court of Appeals
for the Eighth Judicial Circuit.

The United States of America:

To Arthur W. Ide, Charles Grant Caldwell, H. B. Loomis,
Christopher Althoff, Arthur R. Thornburg, Earl Kysar,
D. E. Townsley and Agnes H. Caldwell, Greeting:

You are hereby cited and admonished to be and appear in
The United States Circuit Court of Appeals for the Eighth
Circuit, at the City of St. Louis, Missouri, sixty days from
and after the day this citation bears date, pursuant to an
appeal allowed by The District Court of the United States
for the District of Wyoming, sitting at Cheyenne, wherein
The United States of America is appellant and you are ap-
pellees to show cause, if any there be, why the decree ren-
dered against the said appellants as in said appeal men-
tioned, should not be corrected, and why speedy justice
should not be done the parties in that behalf.

Witness, the Honorable John A. Riner, Judge of the Dis-
trict Court of the United States for the District of Wyoming,
at Cheyenne in said District, this twentieth day of May,
A. D. 1920.

JOHN A. RINER
Judge.

Service [os] the within citation is hereby accepted for
and on behalf of all of the above named appellees this 27th
day of May, 1920.

JOHN D. CLARK
AVERY HAGGARD
W. E. MULLEN
Solicitors for Appellees.

176 Endorsed: Filed in the District Court on May 20,
1920.

177 (Motion for extension of time to file Transcript.)

Comes now David J. Howell, Assistant United States Attorney for the District of Wyoming, and moves the Court for an order allowing the above named plaintiff an additional sixty (60) days from and after the 19th day of July, 1920, in which to docket the above entitled case and file the record thereof with the Clerk of the United States Circuit Court of Appeals for the Eighth Circuit at the City of St. Louis, Missouri, for the reasons that the record in said case is of extreme length; that there are numerous exhibits consisting of maps, photographs, deeds, and other like documents, and that there has been an insufficient time in which to prepare the abstract of evidence and record in said case to lodge with the Clerk.

DAVID J. HOWELL,
Assistant United States Attorney for
the District of Wyoming.

Endorsed: Filed in the District Court on July 9, 1920.

178 (Order extending time to file Transcript.)

Upon the application of the Solicitor for the United States of America, Plaintiff in the above entitled cause and Appellant herein to the United States Circuit Court of Appeals for the Eighth Circuit, and for good cause shown, the time for the said Plaintiff and Appellant in said cause to docket said case and file the record thereof with the Clerk of the United States Circuit Court of Appeals for the Eighth Circuit, at the city of St. Louis, Missouri, is hereby enlarged for an additional sixty (60) days from and after the 19th day of July, 1920.

Dated at Cheyenne, Wyoming, this 9th day of July, 1920.

JOHN A. RINER,
Judge of the United States District
Court for the District of Wyoming
and the Judge who signed the cita-
tion theretofore issued in this cause.

Endorsed: Filed in the District Court on July 9, 1920.

Election as to Printing.

To the Clerk of the District Court of the United States for the District of Wyoming:

You are hereby notified that the United States of America, by the United States District Attorney for the District of Wyoming, elects to take and file in the Appellate Court, to be printed under the supervision of its Clerk, under its rules, a transcript of the record requisite for the hearing of the case in that Court.

Dated this 23rd day of August, A. D. 1920.

C. L. RIGDON,
United States Attorney,
Solicitor for Plaintiff.

Endorsed: Filed in the District Court on August 23, 1920.

Bitter Creek Case

Condensed Statement of Evidence

Note This copy must be filed in Court Please make corrections in lead pencil until opposing counsel meet and agree.

WARD

June 23, 1920.

(Condensed statement of the evidence.)

(Lodged and filed in the U. S. District Court,
August 23, 1920.

S. W. ROBINSON, called by plaintiff, testified:

My name is S. W. Robinson. I live at Byron, Wyoming. I located there in 1900 and have lived there ever since. I knew the Garland and Powell Flats. I was upon those Flats in 1900 and from time to time ever since, up to the present year. I know the creek called Bitter Creek. I saw it in 1900. The occasion of my seeing it in 1900 was that I was riding a good deal for stock over the lands now known as the Garland Flats. It is the land through which Bitter Creek passes. I also had a contract on the Flats for

building a lateral ditch for irrigation. I have been familiar with these lands and the creek pretty nearly all the time since I came to this country. I was riding across the Flats frequently in 1900, looking after horses and cattle. There was no water in Bitter Creek when I was there in 1900, except when it rained. In 1900 Bitter Creek had no defined course. The first place I could find something that might represent Bitter Creek was below Garland. There were a few little springs down by what they called the dipping pen that furnished a little water—but a little. It was not what I would call an irrigating stream. The water from the springs did not run over 100 yards. There were no springs above these springs. I never saw any well-defined bank or bed of any stream above Garland—there might have been, but I never saw any. I have been above Garland. I don't know of any source from which water was furnished to this stream from the year 1900 up to and until the time they began irrigating Garland Flats. If there had been I would have known it. Prior to the year 1908 Bitter Creek did not consist of anything at all. They called it Bitter Creek on account of a little rain and things of that kind. There would be little puddles of water standing, but the water was not fit to be used. I never saw

187 any running water in it only those little springs.

From 1900 until 1908, there were no grass or bushes or trees growing along the banks of this creek above Garland such as grow along creeks in Wyoming. There were a few trees below Garland near the springs. Since water has been turned into this creek the banks are clothed with verdure, and willows and cat-tails grow along the bank. I was engaged about four months in 1900 in building an irrigation lateral ditch upon Poxell or Garland Flats. Part of the time I was camped right on Bitter Creek and part of the time I was down about two miles below there where those springs are. During the whole four months I was camped there, there was no water in Bitter Creek. We hauled the water for domestic purposes from Shoshone River and watered our horses at Garland at a big tank—we paid 10c a head to water our horses there. Prior to the time of the beginning of irrigation on these Flats, there was no flowing water in Bitter Creek from the uppermost parts of it down to the point where it enters the Shoshone River at any time I ever saw it, except on the occasion of a freshet or rain or melting snow—but there is plenty of it now. At little places there is melting snow upon the Garland Flats tributary to this stream where it washes off

the bench and comes down in Bitter Creek. During the year 1900 and up to and including the year 1908, I never saw any melting snow in the spring of the year which produced a flow of water in Bitter Creek. If there had been I would have known it. There is not sufficient snow fall within the water-shed of Bitter Creek when it melts to produce a flow of water in this creek. What they call the bench up there is a large bench of land off North from Powell and there is nothing but dry farming on that bench. There is no portion of this bench that drains into Bitter Creek. Some years the snow doesn't fall at all on this side of the bench towards the Powell Flats, and some winters it falls possibly five or six inches but it doesn't melt; it lies there a long time and goes right into the ground. It does not melt rapidly enough to produce any water which reaches any channel which could be called Bitter Creek.

Cross-Examination.

I first went there in 1900. At that time I located at Byron, which is down on the Shoshone about 12 or 14 miles East of Garland. I lived on the Powell Flats about four months. That was 12 or 13 years ago. I was there in May and I [staid] there about four months. I was located right at Garland part of the time and part of the time about two miles below there. The water that falls upon the Powell Flats and community runs down Bitter Creek. There are something like 40 square miles of territory up there that is tributary to Bitter Creek. I am familiar with Bitter Creek from about four or five miles above Powell all the way down. I never saw any Prongs where two forks of Bitter Creek are located. Bitter Creek from Garland down was probably two or three feet deep and probably eight or ten feet wide. Above Garland there wasn't any depth at all to amount to anything. There was for a little way—part of the way to Powell—there would be a wash and from there on it would be still smaller. I was out there in 1900 gathering and looking after cattle and horses. They got their water to drink at the puddles and those springs. Whenever there was a big rain the water would stand in big holes. Some places there would be holes five or six feet deep. I mean the puddles in Bitter Creek. These would stand for maybe a month or six weeks, maybe two months—little puddles. I was there in 1900 and you might say I have been here since. There was no water running at all. In the Summer time I was probably there once a

month, sometimes oftener. When I was there once a month in the Summertime I was looking after cattle. There
189 was no dry farming there at that time of the year.

There has been dry farming since then upon the bench the last two or three years. That is where the snow accumulates upon the bench. Some of the snow on the bench probably would melt and run down in Bitter Creek and some of it would run the other way into a creek we called Cottonwood over on that bench.

Re-direct Examination.

There is no dry farming on the bench within the watershed of Bitter Creek. The bench is an entirely different part of the country and drains in a different direction. The dry farming there is within an entirely different water shed.

BERT ALEXANDER, called by plaintiff, testified:

My name is Bert Alexander. I live in Byron. I came there in the spring of 1900 and have lived there from that time until the present. I was one of the first settlers that ever came into the country in the vicinity of these Garland Flats. The people who came there in 1900 came many years before anybody else located on these flats or in the vicinity of them. In 1900 I herded the cowboys' horses and stock up this Bitter Creek country. I did this through the entire first Summer pretty well along towards Fall. I had occasion and opportunity to know pretty well about Bitter Creek in the season of 1900. Since that time I have been familiar with Bitter Creek in the Summer seasons. The first two years we were engaged in building the canal that was right along the mouth of Bitter Creek. I became familiar with it from the mouth of the creek during the building of the canal. I did not have occasion while building the canal to go from one end of what you call Bitter Creek to the other. We grazed cattle right up the creek, some of them pretty near to Eagle's Nest. They
190 would stray away and go that far. The cattle not only ranged along Powell Flats but up on the bench. Powell Flats contain, I should judge, 40 or 50 square miles. Lots of years they have pretty heavy rain in that country. There was no rain in 1900 to speak of—very few rains in 1901. The rains are infrequent and the only water that occurred in the creek was at the time of those rains and while that water from the rains was running off. There

was no source to Bitter Creek in 1900. I don't know of any springs that supplied water to Bitter Creek. I think I would have known about them. That was what we were hunting—water. We didn't find any in this Flat. Of course, as I said, there were a few stagnant pools. There are little streams or springs that come out under ledges or rocks. They were along in the bed of the creek. These stagnant pools did not produce a flow of water in Bitter Creek, except when it rained and there was no water in the bed of the creek other than where these stagnant pools were since 1901. I have been familiar with Bitter Creek very little up and down the creek. I was familiar with the mouth of it and if water had run down I would have seen it. In 1903 and 1904 I crossed the mouth of Bitter Creek twice a day in the Summer when I was riding for cattle. There was no water in it then. During those two years I crossed it, there was no water flowing at all in Bitter Creek except during rains. From 1903-4 I have been familiar with those Flats and Bitter Creek only off and on. I had seen it from 1904 up to 1908. There were two years I was working on the Government project there when I saw it. I cannot tell you the years. It was about when they first started—when they were putting in the drops along there. It was prior to 1908 and before they turned the water in there for irrigation. I saw Bitter Creek frequently during those times. There was no water in the creek then. There

191 was no channel to speak of until two miles above Garland as far as there was any ravine to amount to anything at all. Above that there were little holes along where the rain would come down through the little draws. When it struck this ditch it would furrow out a little hole—it was a little bigger and it burrowed as it went on up the country. There is now one fork of Bitter Creek where the big draw comes down. That is a small fork that comes down off what is called the big bench. There is one little ravine there. It runs into Bitter Creek when there is water there. I don't know whether or not there is a continuous channel from that draw to Bitter Creek. There were no grasses such as grow along water courses nor any bushes, cat-tails or trees that I ever saw such as would grow along water courses. There are no trees near the mouth of Bitter Creek. When I came there in 1900 and from that time up until 1907 there were no settlers up there on this Flat. No one was living along this creek, nor anybody on any of Caldwell's land. There were no buildings or structures

along there showing that anyone had lived there. There was no water that could have been procured along that creek for domestic purposes.

Cross-Examination.

I came there and located in Byron in 1900. Byron is about 15 miles from Powell and about 8 miles from Garland. I have been familiar with Bitter Creek since 1900 down to the present time. I know where it was located. It is located where it is and that is what everybody in the whole community around there calls it. I do not know how it gets its name. When I came there in 1900 I did not know what it was until I found out what they called it. I do not know how long it was before I found it out, whether it was one week or two or three, but the first year I got there it was recognized as Bitter Creek.

I don't know how long prior to 1900 it was called Bitter Creek. The way I could determine it from any other rivulet was that it was the main draw of all flood water. At Garland the bed of this creek was very small. Some places there was no bank on one side; where it would wash it would form a bank three or four feet high in places; in other places it would be nothing. There was no certain width to it. Where it comes out of the small bluff which it comes through after it leaves Garland, it comes into a hollow, a kind of a small canon; then it comes out on a small flat; from there down where I am most familiar with it, there is no channel at all. It spreads over the country, that is down close to the river. I know the country from Garland up to Eagle's Nest. Eagle's Nest is about 20 miles, I guess, from Garland. I know the stream from Garland down to the mouth which I would say is somewhere near three miles, altogether embracing 23 miles of the course of one branch of the stream. There are a dozen branches that come in little ravines into it. As far as a branch is concerned, there is no branch of it and no branch of the other at that time—just where the water made a mark. I don't know what you mean by this creek rising because I have never seen any rise of the creek. There is one small spring up above Garland. I don't know just how far. I never saw any springs up at the head of it. I don't know of any up there if there were. I crossed the mouth of Bitter Creek along in July, August and September, and that was after the snow had melted up on the hills. It was dry when I crossed it. There were no trees that I

ever saw on the banks of this stream in 1900 and 1901. I didn't pay particular attention to it. I wasn't hunting trees. I don't think there were any trees there; I never saw any that I remember of.

193

Re-direct Examination.

The spring I mentioned above Garland does not furnish any water to Bitter Creek. Eagle's Nest which is 20 miles above Garland, is in an entirely different water shed and is another creek. It doesn't come into Bitter Creek at all. I think it comes down into the river. I never followed it. When I speak of 20 miles above Garland I don't have reference to the head or source of Bitter Creek. There is no place that could be determined as the head or source of this stream. There is no head that I know. There is no place water could come from to go into the creek.

Re-cross Examination.

I am here to testify of no creek. I don't know of any creek. I don't know of any head of Bitter Creek. I do know what is called the channel that carries—I do know what is called Bitter Creek. Two miles above Garland is as far as there is any channel that would be called carrying water. I was there in 1900 as a representative of the Mormon Colony.

RAY ROBINSON, called by plaintiff, testified:

My name is Ray Robinson. I live at Byron and came there in 1900. I was one of the first settlers then that located in the vicinity of these lands called the Powell Flats. My occupation is just following public work. I settled there with a colony which was established at Byron. I had occasion to go upon the Powell Flats. I was working along on the railroad. It was in the Fall and Winter of 1900. My work there took me right on the banks of Bitter Creek. I don't exactly remember how long I was there—two or three months. I can't tell what months they were, but it was in the winter of 1900. The outfit that was next to me had their stables right in Bitter Creek. The banks of the
194 creek formed the walls of the stables. That was right down just below Garland. I don't know how long the stables remained there. I think until the contract was completed. I didn't work there all the time. There was no water

running down Bitter Creek at that time nor was there water in Bitter Creek then for watering animals or domestic use. Water was hauled from these springs about two miles, I should judge, below Garland. I think it was 1907 or 1908 that I worked upon Government work upon the Powell Flats pretty nearly due North of Powell near Bitter Creek. I worked for probably 10 or 12 days on that job. I had a contract for the construction of ditches for this irrigation system which was to be opened. We were camped close to the bed of the creek for about four months. That was below Garland. We were camped right at Garland, on the creek at first, and when we finished our work there we pulled down to the springs. There was no water in this creek during these times—nothing but these springs. The springs did not furnish any water to the creek to make a flow of water in it. They consisted of a little low water bubbling out of the ground. They didn't run far enough to make a flow of water in the stream. I don't think I was ever up Bitter Creek above straight out from Powell. Probably 8 or 9 miles from the mouth of the Creek. There was no water in the creek at that point. I don't know whether there is any water that could be furnished to that creek or these Flats. There was no water coming down there at any time except when there was a rain storm. I never saw above these springs any grasses or bushes or trees growing along this creek which are characteristic of any flowing water in this country or any other kind of water so long as it is there long enough. There were no settlers in this territory in 1900. There were some at Garland. That was just prior to the time the Reclamation Project opened. I do not know of any place along Bitter
195 Creek where a settler could have established a house and secured sufficient water for domestic purposes or to water cattle. If there had been I would have thought so. The cattle that ran around on these flats got their water from little holes where the rain would come down and hold the water. I have seen cattle drinking out of them. I have never seen any by the bed of the creek.

Cross-Examination.

Some cattle got water out of the bed of the creek. Others got water at the springs below Garland and at the river. I do not know of any other places besides the spring below Garland. I know the creek just about due North of Powell and the bed of the creek there is just a small wash. It was

probably 4 or 5 feet wide on the bottom along there in places and probably wider in places. The banks were probably 2 feet high, that is in some places, of course, where it is cut into the bank by these freshets. It runs out on the level. I came there in 1900, but did not work there all the time that year. I did stay there in the Winter. I do not remember the month. It is not a fact that Bitter Creek was frozen up at that time. There was no water at all in it. I do not remember whether there were stores down there at Garland before the irrigation project began to operate. It was just before or just after. I wouldn't say for sure, but there were some buildings there. I couldn't say how many people live there. There wasn't very many. I think there was a printing office there. That was the first building that went up. I think they dug a well for water on the bank of Bitter Creek. There was one there. I was in the country there in 1902. I lived at Byron. I remember 196 the dyke or levee constructed by the railroad to prevent water flooding the town of Garland. It is not very large. I could not say how large. I should judge about 100 feet long and three or four feet high. I said that a camping outfit camped in the bed of Bitter Creek. There were 20 or 30 teams there. We had stables for them. We had the whole camp outfit there, but not in the creek. We had just the stables in the creek. The creek at that point was probably 10 or 12 feet wide. They widened it out some to put their stables in. I don't think it was wider than 10 or 12 feet. They cut down the banks to make it straight. The reason I happened to notice there was no grass or any brush growing on the banks of Bitter Creek was because it wasn't there. I did pay particular attention to it, and there was none there that I ever saw.

CARL ANDERSON, called by the plaintiff, testified:

My name is Carl Anderson. I live at Byron, came there with the colony which settled in there in 1900. The colony was building an irrigation system around there. I had occasion to come to the Powell Flats, for I rode quite a bit in that country for horses and cattle. I did not work on the Powell Flats. I was up on the Powell Flats some in 1900 and up until 1904. I rode them quite a bit from 1900 up to 1904. It was most all the time in Summer and in Winter. I crossed the territory occupied by Bitter Creek probably once or twice a month on an average. I was in a

position to tell whether there was water in that creek. There was no water there either in Summer or Winter unless there was a rain fall or something. There was no water in it. In the Winter time a little snow drifted in. Some years a great deal of snow was upon the Flats or the water shed of Bitter Creek during these years. There was not sufficient snow to produce a flow of water in Bitter Creek very long except in case of a sudden thaw. It would run 197 a little ways. Probably in the heat of the day 3 or 4 miles. There was not sufficient water at any time that I saw it there during the 4 years to produce a flow of water in Bitter Creek from the head down to the mouth. It would run at the mouth, too, of course, when there was snow there. There was no source of supply in Bitter Creek other than snow or rain. There are no springs that supply Bitter Creek. There is a spring below Garland about two miles. There is a very small one. It would not run over 100 yards in the Spring of the year when there was plenty of water. I should not say that it would flow a stream of water for 100 yards as big around as a lead pencil—it would just be damp. I do not recollect any other springs there. I do not think there is any spring up there only just holes—just ponds or holes. The places in the ground sometimes called springs did not produce water which flowed down the stream. I looked for water in Bitter Creek during those times from 1900 to 1904 and at other places on these Flats. I looked for the water to drink and water for my horses. I did not find any in this creek except what was standing in the pools. I have not been familiar with Bitter Creek since 1904 up until 1917 when I came back. Bitter Creek is changed now from what it used to be when I knew it in 1904. There is lots of water in it. It is not as it was. It is artificially made into a bed, but at places it is spread out. In other places there are high banks. It is after water has been turned in and been flowing constantly since the irrigation comes. Now there is a large stream of water flowing down Bitter Creek. There was a channel to Bitter Creek above Garland, probably up about 2½ miles. I never followed the creek up. There is another wash above there. It might be the same creek but I couldn't say whether it was or not. There was no grass or vegetation that grows where water is along the banks of 198 Bitter Creek from the years 1900 until 1904. The only vegetation there was salt sage, bunch grass and buffalo grass just as it grew out in the middle of the prairie of the middle of the desert.

Cross-Examination.

I am 34 years old, and in 1900 I was 15, going on 16 in the Summer. That was when I began riding up there. We camped at the mouth of Bitter Creek. I knew Bitter Creek up to between 3 and 4 miles above Garland. I crossed the creek up there but couldn't tell whether it was called Bitter Creek or not. I could not tell whether that was the continuation of Bitter Creek or some other creek.

WILLIAM CHRISTENSEN, called by plaintiff, testified:

My name is William Christensen. I live at Byron. I came to Byron in the Spring of 1900 with the men that formed the colony. My occupation is farming principally. I had occasion in the year 1900 to go on the Garland Flats and Powell Flats. We hired a man to herd our horses and cattle on that Flat and about two or three different times, of Sundays, I rode up there to visit the man who camped on the river and then we would ride across the Flats and look at the horses and cattle. That was in 1900 and I saw Bitter Creek on those occasions. We camped right at the mouth of it from May until the first of October. Nearly the whole colony was camped there and used to cross the creek every morning to go to work at the head of the canal which we were building for the colony. I was familiar with Bitter Creek from May until October, 1900. During that year I went up the creek as far as where Garland is located now and then we went across the bench. We never did cross the creek clean up. I was familiar with Bitter Creek as far up as where Garland now is. I never did see
199 a drop of water in Bitter Creek during those months of the year 1900. If there had been any there during any of that time I would have been sure to have seen it. Since 1900 I have been familiar with the creek. We had a good deal of bother getting water in the head of the canal during the latter part of the season and would have to cross the mouth of Bitter Creek going up to the head from Byron and we used to go by there quite often and then I worked on the Flats while the Government was constructing their laterals. When I crossed Bitter Creek going to our canal I never saw any water in it. Later I worked constructing laterals for the Reclamation Service on the Powell Flats. I went all over the land that could be included in the water shed of Bitter Creek. I never found any source of supply of water for Bitter Creek. We found no

water in Bitter Creek. We hauled our water to water our animals, also to drink ourselves. We hauled that from Powell in pails. I think that was in the year 1907 and it was prior to the time when the irrigation of these Flats began. I think the irrigation began in 1908. There was not sufficient water on these Flats to furnish us with water for our animals when we were building the laterals. Up at the head of Bitter Creek North of where Powell now is there were small washes there, but there were none so large but what we could plow right over them with a team. There was no water running in any of them. They were dry as bone. I didn't see any grass or bushes that would indicate that there had been a flow of water along the bed of Bitter Creek other than maybe produced by a cloud burst. A cloud burst will create great gullies in the land. You will often find these washes on any range. In 1900 there were no settlers upon these Flats. Our colony had some horses on these Flats and on the Flats below Powell and Garland. I don't know whether they ever went up on the big bench because I asked the fellow where his stock got water 200 and he told me that I had to go to the River for water. I suppose the horses would go up on the bench. I don't know whether there are over 40 sections of land in there.

Cross-Examination.

It was due North of Powell that I said that the washes from Bitter Creek were so shallow you could plow right through them. There was practically no indentation in the soil at all to speak of. We could plow right across them.

ROY WILLEY, called by plaintiff, testified:

My name is Roy Willey. I live at Byron. Came there in 1900. Was one of the colony that came there that year and established a settlement. We camped at the mouth of Bitter Creek during the summer of 1900. We crossed Bitter Creek that Summer about every morning when we went to work. It was near the mouth of the creek. I think that if there is any water in a stream it will be at the mouth of it. There was no water in this Bitter Creek during the Summer of 1900 that I could see, only rain, freshets. We had very little rain in 1900. In 1900 we crossed Bitter Creek up towards Garland. We crossed Bitter Creek going fishing once, but not in Bitter Creek. There was no water in it.

I have been familiar with Bitter Creek since 1900. I crossed Bitter Creek when I hauled hay at Powell when they were taking out that irrigation ditch. I crossed it below Garland. There was no water in it. It is dry wash and there is no water in it except it is caused through freshets and rain that I have seen. If there had been water I would have known it. I have never at any other time worked on the Flats or been near Bitter Creek. It is a fact, however, that I crossed Bitter Creek whenever I came from Byron to Powell or Garland during all the years
201 from 1900 up until they turned the water in. There was no grass or verdure that indicated a flow of water growing along the banks of Bitter Creek. The streams of Wyoming in the vicinity of Powell have grass and cat-tails along the creek banks and so do the irrigation ditches and Bitter Creek has now.

Cross-Examination.

I was there in the year 1900 and ever since. I worked near Bitter Creek in 1900 and another year I hauled hay to Powell and crossed over Bitter Creek. That was the year the water was taken out on that project. I would judge about 1907 or 1908. Powell was established, I think, about 1905 or 1907. I think they had some small houses about that time. The year 1900 was especially dry—not very much rain. I camped at the mouth of Bitter Creek in the summer time of 1900. The other time I was on Bitter Creek near Garland was when I went hunting and fishing and that was in 1900. I saw no water there then.

RAY E. REED, called by plaintiff, testified:

This paper marked plaintiff's exhibit 17a is a map called "Right of Way for Drainage Ditches in Lot 37, Township 56, Range 99 West", which was filed in the office of the Commissioner of Public Lands by the Reclamation Service of the United States on August 21, 1918.

The plaintiff offers in evidence map, Exhibit 17, and asks permission to withdraw and substitute a certified copy.

Mr. Clark for Defendant: We object to the introduction of this exhibit on the grounds that it appears to have been filed subsequent to the commencement of this action and therefore could not be justification of acts complained of

202 by defendant; secondly and principally for the reason that it was filed in the office of the Commissioner of Public Lands after the land in question, being state land, had been lawfully sold to the defendants Caldwell and others, and for that reason no rights could be acquired by the United States through the filing of this map.

Mr. Rigdon for Plaintiff: We offer it and in respect to the objection, it might be said that it is a question for the court to determine whether or not we get any right in the matter, and the objection that it was filed after the suit was commenced is of no avail because it was before we entered on the land or took it or dug any ditches.

The objection is overruled and exception allowed and permission given to withdraw the exhibit and make a substitute copy.

LOUIS WOLZ, called by plaintiff, testified:

My name is Louis Wolz. I live at Byron. My occupation is farming. I came to Byron with the colony which came there in 1900. There were some ranches on the river before I came. Excepting them we were the first settlers in this vicinity. By the river I mean the Shoshone River. We were camped that Summer about half a mile from Bitter Creek. I used to cross Bitter Creek looking for my horses. I turned my horses loose and they would go up this wash and I followed them in the wash and up to about where Garland now stands. I saw Bitter Creek enough in 1900 to be familiar with it. There was a spring about half way between the mouth and Garland—a small spring. It would water a few head of stock. I never saw the water running over 150 feet from the spring. It runs from where it comes out of the ground into a hole, a kind of a little hole there, and the stock were able to get water. There is another little marshy place towards the head up above Garland. It produces no water to amount to anything.

203 It does not produce as much water as this one below.

In 1901, I worked on the railroad right at Garland helping to put in a little siding. We worked there about a month and a half in the Fall. That was the only time I saw it, in 1901. There was no water in it then. Since 1901 when the Government put in their project I used to haul vegetables, tomatoes and stuff to the camp, and I used to sell some stuff at Garland and go on up as far as Ralston.

That is as far as Garland Flats. During those times I crossed the creek three times right close to the spring, crossed it at Garland and crossed it about a quarter above there at Mr. King's ranch. I never saw any water in the creek. If this creek had had any flow of water from any natural sources we would have taken up a homestead. I could not have helped knowing it if it had had water and all the rest of the men would have known it. I call it a dry wash. I don't know the name—there is no water shed at all. When they were building the construction there, was the time when I passed up and down the creek and crossed it. During the year 1900 and up until the time they dug this irrigation system there was no grass or other herbage growing along the bank of this creek which indicated that water ran in the creek except only down toward the mouth where there were a few scrub cottonwoods growing close to the spring. There is lots of water in the creek now. When I came there in 1900 and up until the time they opened up this project in 1907 and 1908 there were no settlers upon the Flats.

Cross-Examination.

I said I would have taken up a homestead if there had been any water there. I heard that Colonel Cady under the Carry Act had some of that land, but I didn't know he had it all. I heard he had some land and contemplated making a ditch there but I understood it fell down. That was one reason there were no settlers. There was no
204 water. There was no chance for any one to live on that Flat at that time. There was a sheep shearing corral right close to this spring at one time. It was not close to where Mr. Caldwell lives. Woodruff might have lost 50 sheep in the water at Caldwell's place. He might have done it in a cloud burst or a rain storm. That creek rises pretty high in a rain and possibly will run for 12 or 24 hours. I don't know whether it was a cloud burst, but it must have been a rain storm because there is no water running steady. I was there in 1900 from June until about October and the creek was dry then. I was there in 1901 and it was dry then. All the further I had gone up the creek then was up above Garland. During those years in the summer time I found two springs in the creek, one below Garland and a small one above, but not enough for irrigation and hardly enough for culinary purposes. There was not running water enough for my stock in that par-

ticular spring, just a little muddy spring. The stock used the water at that lower spring. There was a hole in the sandstone. This water used to trickle down to it and sometimes stand in this little pond and stock used to water there. After the government started their work I used to sell vegetables to the camp. That was not the only time I was over there from 1900 until they put in the project. Of course, I have been to Garland several times. We do business there, that is we have since 1901. There were some stores and the Government got water by digging their deep well. I could not tell how deep. Before that time they hauled water to Garland and the railroad hauled in water and they got water around something like 150 feet I think right close to the creek.

BYRON D. SESSIONS, called by plaintiff, testified:

My name is Byron D. Sessions. I live at Byron. I came there in 1900 with this colony that has been mentioned before. We camped or located near the mouth of Bitter Creek all of the Summer of 1900. I had occasion then to see Bitter Creek every day through that Summer, but not in the Winter. We moved down to the town of Byron for the Winter. During the Summer of 1901 I had occasion while looking for my stock upon the Garland Flats to see Bitter Creek approximately every two weeks. I don't know how often I saw it in the Winter. I went to Garland in the Winter at least once a month and crossed the creek going to Garland. There were no bridges across the creek in 1900 nor any bridges until the irrigation project built bridges across the gulches and canals. From 1900 to 1908 I saw Bitter Creek when I went to Garland. In going to Garland we crossed it twice. We went there Winter and Summer. I have ridden around over Powell Flats in the Winters of 1901, 1902, 1903 and 1904. I rode all over the Flats. I think I had opportunity to and did become familiar with portions of Bitter Creek. I never found any water flowing in Bitter Creek from any natural source. It is not possible that there could have been any water flowing in Bitter Creek from any natural source other than the elements, rain and snow. There is no other source to this stream. From 1900 up until 1908 there has never been a time when there was any water flowing in Bitter Creek other than from a rain storm and snows. No settlers were on these Flats in 1900 or until 1907. Bitter Creek is

just simply a wash—a dry wash. It extends up I would say about two miles above Garland and from that point two miles above Garland on up what would be the stream—there is no bed to it.

J. H. NEVILLE, called by plaintiff, testified:

My name is J. H. Neville. I have lived constantly at Byron since 1900. I was one of the colony that came there in 1900 and made a settlement in the town of Byron.

206 I am acquainted with Garland Flats and Powell Flats; became first acquainted with them on April 10, 1900. I first knew and saw Bitter Creek in May and April, 1900, and during all of 1900. I first came to the creek at the mouth of Bitter Creek on the 8th day of May, 1900. The occasion was that I had to look over the line of canal we were going to build and we had occasion to cross Bitter Creek to carry our canal across Bitter Creek. We examined the mouth of Bitter Creek there because the canal crossed Bitter Creek and the grade of our canal was just about on the bottom of Bitter Creek where the bed of the creek had washed down. There was not a drop of water in Bitter Creek. We were camped there in the Fall of 1900 because our canal crossed Bitter Creek and I saw it every two or three days—the mouth of Bitter Creek, and I could look up Bitter Creek a ways. In 1901 I was employed as a book-keeper on the construction work on the grade on the railroad for Mr. Packard. I had charge of the commissary. I went there on the 10th day of January, 1901, and remained there in the camp looking after his interest and business right where Garland is now until the latter part of April. Then we moved away. Then in 1902 I was appointed Commissioner by this Court and had occasion to travel from my home in Byron into the Clark Fork Valley from the Clark Fork River. I used to make my trip about every 10 days. On these trips I crossed Bitter Creek. I crossed it six times if I went by way of Garland. I used to make one trip about every 10 days during the entire year from 1902 to 1908. I had an opportunity of knowing whether there was water in Bitter Creek. During the whole time we were camped at the mouth of Bitter Creek from May until October there was no water flowing in Bitter Creek. From January 1901 until April of that year when I was located at Garland in charge of the commissary there was no water flowing in Bitter Creek. I know this

207 because we had our stable built in the creek; one side of the bank formed the manger—right where Garland is, or close to Garland. During the years 1902 up and until the year 1908 I crossed Bitter Creek six times on an average of twice a month Summer and Winter. I didn't go North of Garland in crossing Bitter Creek. I crossed it twice before I got to Garland, then when I left Garland to go West I would cross it again. That would make three crossings of Bitter Creek. On these occasions I never saw any water in Bitter Creek. Just before the Reclamation came in there was a storm took place—a rain storm, and that is the only time I ever saw any water in Bitter Creek running at all until after the Reclamation Service came there. If there had been any water in Bitter Creek I surely would have found it. I don't know of any natural sources to Bitter Creek other than the rain and snow. I have been across the valley several times through there over that big bench and down that way and never saw anything that would be a natural source to it outside of the rain storm. If there had been any source to Bitter Creek or any water flowing in it it would have been a matter of general knowledge. There were no settlers along the bank of Bitter Creek from the year 1900 until the year 1907. There were no grasses growing along the creek that would indicate the presence of water. There was a little old scrub tree or two down towards the mouth—cottonwood scrub trees—not very far from the little spring—but we could hardly speak of that as a spring. From the mouth of Bitter Creek to Garland where we had our stables the bed of Bitter Creek is gravel and some rock formation, and in this rock formation there are little pools of water, kind of springs—little pools of water stood in there and we would haul water from there to camp. There would be two or three of these pools in the rocks in the bed of the creek. The bed of the creek varies very much. There are some
208 places two or three rods wide and some places one rod and some places the bank would be four feet high and some ten feet high, because the ground is kind of rolling. The old channel above Garland for a ways out Northwest of Garland varies in width but not so much in depth. It would be about $2\frac{1}{2}$ or 3 feet there, maybe four. It would range from 8 to 10 feet or 12 feet wide. In some places a little wider owing to the way the wash was. Bitter Creek is about parallel with the other dry washes in the same vicinity. There are many of them. I think you can trace a channel for a mile or two above Garland. From

that point up there is not a well-defined channel. It is a broken channel. It is disconnected in places all the way as you go up towards the big bench—a disconnected channel that varies in size.

Cross-Examination.

Bitter Creek is just about on a par with the other channels or dry washes in that vicinity. It was the main channel for the drainage of the entire territory around there of about 40 square miles. I don't know whether it was a little larger than those others or not. You could go on other water sheds on what is called Alkali Creek near Ralston—that is a bigger one but that is not in this water shed. This channel is the only one given a name in this water shed. It is called Bitter Creek, and was recognized as Bitter Creek when I was there in 1900. I helped Mr. Caldwell prepare his application for a permit from the State. I know how large the bed is above Garland for some distance. I know it to Mr. Caldwell's place. I am practically familiar with it from there down to Garland, but I never measured it. I have been up and down and know how large it is practically by judging. My deposition was taken at Powell in November, 1918.

Q. You said in that deposition at that time in replying to this question: "Did you ever follow the channel
209 from there down to Garland, meaning from Caldwell's place?" and you said "No, I never followed it from there down."

A. I never had minutely, not to walk and see what it was, but I have seen it at several places, just as a man walks along and sees things by observing.

Q. Were you ever asked this question: "Do you know whether there is a channel extends from there down to Garland?" and you answered: "There must have been because it was; there was water flowing from there down to Garland; because it was there when the gentlemen got to operating it."

Mr. Rigdon for Plaintiff: We object to that because that was long after the water had been turned in by the Reclamation Service. (overruled).

Witness does not answer the last question.

I never saw running water in that stream during all the time I have known it up until the time the government took charge and began to irrigate there in 1908, except one time.

JEREMIAH AHERN, called by plaintiff, testified:

My name is Jeremiah Ahern. I live in California. My occupation is Civil Engineer and farmer. I was educated as a Civil Engineer at the University of California and had some 35 years experience along engineering lines. I am not now connected with the Reclamation Service of the United States but was formerly connected with it on the Shoshone Project from 1903 until 1908 which was during the period when investigations were being made and construction began. My work was such that it took me over that portion of the project which is known as the Garland division. I had general supervision of all the work in the way of surveys and investigations made on the Garland Flats. I traveled over the Garland Flats many times in many directions, making inspections and locating topographical features. The topographical maps of the Flat were made
210 under my supervision. During that work I became familiar with the natural features of the Garland division of the Project. I know about Bitter Creek. The mouth of Bitter Creek at the Shoshone River at Garland is a well-defined channel. From Garland for about five or six miles South on the Flat it had a pretty well-defined channel and from there on to its source along the edge of the bench to the North and the West it wasn't very well-defined. In fact, in many places there was not a continuous channel at all, but it consisted of a series of dry washes and depressions on the surface of the ground through which water flowed after a rain storm. It was always assumed that the water in Bitter Creek was insignificant, not worth considering as a source for irrigation water. The only water it ever had was that following a severe rain storm; then there would be water flowing in the creek for a few hours. There was not a sufficient snow fall to produce any flow of water in Bitter Creek in the spring for any length of time or for any distance down the creek. There was snow in drifts along the heads of the several branches of the creek, but that snow never formed a permanent stream or anything of that kind. It disappeared almost immediately or evaporated and was melting or seeping in the ground in the immediate vicinity of these snow drifts. From 1903 to 1908

we made no observation of rain fall, but since that time a record has been kept by the Reclamation Service for a period of about 12 years. That record shows an average rain fall about 5.9 inches—including both snow and rain. I am familiar with the area that is drained by Bitter Creek. That drainage area is about 30 square miles. That is immediately above Garland. Of course there is some below Garland. In fact, it drains the entire Garland Flat. About 30 or 35 square miles are drained above Garland. I cannot state what the evaporation is, but it is great—that is, great compared to the arid region in general. The average
211 rain fall, including snow, amounting to 5.9 inches, is distributed over the entire year. The heaviest rain fall is late in the spring in May and June. There is very little during the winter months. All of the precipitation in those months is in the form of snow and not very much of that. The amount of rain fall there is not sufficient to produce water enough to make a flowing stream. Were it all bunched together and turned down the stream at once, it would make quite a stream. During the time I was in charge of the project from 1903 to 1908, there was no vegetation whatever along this creek except that typical of the Flat in general. A rain storm of one inch over the entire Flat is distributed over an hour or two of time would probably not cause any flow in the creek. It would most of it seep into the ground. During the period of time I was there from 1903 to 1908 there was never any water in Bitter Creek sufficient for the irrigation of any land. The only water was during a period of time immediately after a rain storm. The first water turned into this creek for the purpose of irrigation was during the month of May or June 1908.

Cross-Examination.

I have not returned to the project since 1908. I used a copy of a topographical map I had in my possession prepared in 1905 by the Reclamation Service to refresh my recollection as to the situation. My headquarters when in charge of the Project were in Cody about twenty-three or four [miles] from Powell. Cody was the center of active work up until about 1904, then a camp was established at what is now Powell as a headquarters for survey parties engaged in making surveys and investigation on Powell Flat. Powell Flat is a mile and a half or two miles south of the southern-most branch or prong of Bitter Creek. It has two well-defined branches that unite about three miles

above Garland, but whether upon a school section or not I am not certain. They unite about three miles West or Northwest of Garland and almost North of Powell. The Garland Bench constitutes the Garland Division of the Shoshone Project and is the area shown in green upon the map which the Government has offered. The general topographical features are marked by a bench to the West and Northwest and North sloping to the South. This channel (pointing to map) presents its first signs along the bench and is about fifteen miles from where it enters the river, but that, I think, is the greatest distance from the river. Bitter Creek enters the river Southeast of Garland. The two branches of Bitter Creek are each five or six miles long. From the river to Garland it has a well-defined channel. The channel's depth varies possibly from eight to ten, twelve or fifteen feet in places below Garland or between Garland and the river. The width varies from ten to fifteen, twenty or thirty feet. Above Garland it has a well-defined channel for five or six miles, possibly, which would bring it to a point North of Powell, to about a couple of miles above the junction of these branches. The channel there is not so deep nor so wide. To that distance the banks are fairly well defined. Above the junction of the two branches there are many small broken channels that go together to form the drainage of the water areas for the run-off. These channels are not continuous but are broken, being two or three feet deep in places and then disappearing entirely. This stream was known as Bitter Creek when I first became acquainted with the territory. There is no other stream entering the Shoshone River West of this stream that has the same character. Alkali Creek has about the same character but is about eleven miles above Garland and the nature of its drainage basin is different from that of Bitter Creek. Alkali Creek is an intermittent stream, dry some periods of the year and flows some water each year. I do not know the area it drains. I believe it does drain a part of the area called Highline Unit of this project. The next natural drainage channel East of Garland is Pole Cat Creek which drains the country around Frannie. It is about four to six miles below Bitter Creek. It is more of a creek than Alkali Creek. These channels differ from Bitter Creek in that Bitter Creek drains a comparatively flat area—Garland Flats and a small portion of the Flat to the North of Garland Flat. Alkali Creek drains a more rugged country, the slopes are steeper, not so much flat land as the drainage tributary to Bitter Creek.

The same is true of Pole Cat Creek. I do not know whether Bitter Creek drains a larger area than they. These three channels do not constitute the sole drainage of the territory North of the Shoshone River from Cody to the State line. There are creeks between Cody and Alkali Creek, one called Eagle's Nest Creek and another creek whose name I do not recall now. It is about ten or eleven miles from the Shoshone River North to the Watershed between the Shoshone and the Clark Fork River. I would not say that for the area North from the Shoshone River running 30 miles there are but three intermittent channels constituting the natural water courses for there are some creeks below Frannie. From Alkali Creek to Garland is about eleven miles and from there to Frannie about eight or ten miles, probably fourteen. I do not recall the exact distance. We made no observation when I was in charge of the system in regard to using Bitter Creek for a source of water supply because we did not consider it was a source of supply, in fact, it was considered useless as a source of water supply and was never considered. Up to the time I left no work was performed in reference to using the bed of Bitter Creek in any way.

Re-direct Examination.

There are many gullies similar to what is called Bitter Creek up and down the Shoshone River.

214 W. A. STEBBINS, called by plaintiff, testified:

My name is W. A. Stebbins. I live at San Diego, California. I am not now connected with the Reclamation Service, but was connected with it as Assistant Engineer on the Shoshone Project beginning June 1906. I am a high-school graduate and received a technical education at the Colorado School of Mines. I have had 16 years experience. I came to the Shoshone Project in June 1906 prior to the time water was turned into the irrigation system of canals. I went there as Assistant Engineer and was later made Project Manager. My first work in 1906 was to divide the land into farm units of 40 and 80 acre tracts. Then I was given charge of the location and distributing section and later I was in charge of the construction of the system of canals and concrete structures. My work of dividing the land into farm units took me out upon each farm unit of the entire Garland Flat. I was engaged in that work for nearly a year and had an opportunity to observe Bitter Creek

during the entire period. Below the town of Garland there was a reasonably well-defined channel to Bitter Creek. Above the town of Garland a fairly well-defined channel for a distance of perhaps three miles. There the channel split and from there on up the channels petered out and it was impossible to trace them as a well-defined channel up to the edge of the drainage area. This creek carried water after a cloud-burst or a rain of the cloud-burst variety. The character of the channel from three miles above Garland and down indicates that Bitter Creek had never been a continuous stream a torrential flow—a flow of short duration. There was usually a vertically cut bank with no grass or trees or vegetation of any kind. It was similar to other gullies produced by periodical storms or cloud-bursts. It may have taken many years to produce this channel. I was at Powell in connection with reclamation work until 215 April 9, 1914, with the exception of the first four months in the latter part of 1908. I was there from 1906 until 1908 when the water was turned in for irrigation purposes. During the period of two years prior to the water being turned in for purposes of irrigation there was no water running in Bitter Creek except by rain or storm. My work brought me over the entire Flat but I found absolutely no spring anywhere that could be a source of water to that stream. About 65 square miles is the entire drainage area of Bitter Creek; above the town of Garland the drainage area is in the neighborhood of 30 or 35 square miles. Two miles above Garland the area was 33 square miles so that all the water that would enter this creek above the 62 miles above Garland would be water which would run off from 33 square miles. This is not sufficient to produce a flowing stream for any length of time. I never observed any run-off from snow in Bitter Creek during the years 1906 to 1914. There is a peculiar characteristic of the country there, that snow evaporated because of the extreme dryness of the atmosphere. Some of it melted but on the whole the country was so extremely dry that the snow melted away very rapidly. There could be no stream there from melting snow. The total precipitation during the years I was there used to average between five and six inches. We had some observation as to evaporation while I was there and my recollection is that the evaporation was more than 30 inches per annum. While I was there in charge of the construction of the laterals and ditches we established a camp near where the town of Powell now is and we hauled water for our animals and men during those

years from the Shoshone River about six miles away. I investigated Bitter Creek several times as a possible source of getting water from holes for stock at least two months but never with any success. We found it impracticable to depend upon water from Bitter Creek for animals at all.

After we turned water into the canals for the irrigation of this section of the project the channel of Bitter

216 Creek during the irrigation season became a flowing stream due to the inevitable waste of water on the part of the farmers and later to some seepage water or ground water that came into the creek. Bitter Creek was always regarded as an outlet for any surplus water that should be gotten away from the land. We always insisted on the farmers keeping the creek open so that the water could get away as quickly as possible. We deepened Bitter Creek as an outlet for some of the outlet drains. It was expected to deepen the whole channel as soon as we could get to it, but we deepened the channel for temporary outlet for two of these tile drains while I was on the project. It was necessary to put in drains while I was on the project. I think it became evident in 1910 that the lands must be drained in order to be productive. We endeavored to get authority from the authorities at Washington to appropriate money to do this work. That was finally accomplished later. Then a drainage engineer was engaged and the thing was gone at in a comprehensive way beginning along in 1912. The question of the system of drainage was taken up about 1910 and developed from that time on up. I think the first open drainage work was begun in the Fall of 1911—some open ditches. The tile drain work was commenced in 1912. The tile drains which we first put in emptied into Bitter Creek. We lowered Bitter Creek at the outlet end of the Powell drain in 1912. That was the temporary lowering I had reference to when I said we had to make a temporary provision to take care of the drain water. We put in about 35 miles of open and tile drain while I was on the project. I believe we built four drains that emptied into Bitter Creek and at the mouth of two of them we deepened Bitter Creek. It was necessary either to deepen Bitter Creek or construct a channel parallel to it and to deepen Bitter Creek was the practical thing to do. This was necessary to provide an outlet for this drain water and to keep it
217 down below the surface to get that water away from the project where it would do harm in the way of water-logging the land.

Cross-Examination.

It is my recollection that the first discussion of constructing any drainage work came in my office during the Summer of 1910 when water was being applied to lands under this project. That was the third season in which water had been used. Prior to that season the distributing works of the Garland division had been constructed for about 15,000 acres located with Powell approximately the geographical center and running on both sides of Bitter Creek North and South, East and West. Laterals C, D, R, E, T, U, and V, I think, were all that had been constructed. There was no diversion from the main canal direct to the farmers except through these laterals. Laterals C, B and D were on the South side of the railroad. I do not know just how far Lateral C had been constructed. I think we extended the latter. I think it ran much further than a mile or so from the main canal prior to 1910. I am familiar with the land of Caldwell and I think it is correct that Lateral D irrigates land lying entirely Southeast of the school section now in controversy. Lateral D would irrigate practically all of Lot 37 except a very small area in the Northwest corner, but not other land lying above. It would also irrigate a part of Lot 38. It would irrigate some land South of there. I would not attempt to say the area of irrigation from Laterals B and C in 1909. The land that had been taken up was on the average as close to Powell as they could get. Prior to 1910 Bitter Creek above the school section had secured some considerable amount of new water as a result of the irrigation upon the project. The source of this water was from the distributing system, mostly from the wastes of farmers as they attempted to irrigate their land. Up to the time I left in 1914 the distributing system had not been perfected to avoid waste. When I left in 1914 Bitter
218 Creek had a sustained flow throughout the year, from the point known as Drain K. That was the most Northerly tile drain constructed. At the time I left this drain developed water throughout the entire year and passed it into the creek about two miles West of Garland. I cannot say whether or not this was upon the 80 acres unit of Mr. Ide. I am not familiar with his farm unit. He came since I left. It was in that vicinity. The drain is about one mile East from the school section. Up to the time I left there no other tile drain entered the creek above K. I think there was no constant flow in the creek above the point that Drain K. entered it. Up to the time I left there the creek had as a possible origin of the water it con-

tained natural drainage and such other as it might have in this water placed in it through this tile drain and seepage water. In 1910 seepage developed over several hundred acres. I cannot tell how many. The seepage was located pretty well throughout the country. There was some South of Powell and there was also a seepage area over South of Garland and various places about the Flat. The water table has been so raised that we could ascertain at any point the result of the ground seepage. The water table raised over the entire Flat. The contemplated deepening of Bitter Creek was necessary to provide an outlet for the underground seeping at a suitable depth. We deepened the channel of Bitter Creek at the outlet of the tile drain and deepened it below the entire seeped area to get an outlet. That was for a distance of from 200 to 1,000 feet below the drain. To deepen the channel at some places and not the whole channel would have some advantage but it would have been better to have deepened the entire channel. All the work we did in connection with drainage up to the time I left in 1914 was work affecting Bitter Creek. I have not been back to the project since 1914 but have refreshed my recollection with respect to conditions there. Sage

219 Creek passes down near Frannie. Pole Cat Creek flows into Sage Creek I think. I am not familiar with the condition of things in that country outside of the Alkali Creek and the Bitter Creek country. I made investigations there because it had to do with my particular line of work. At the time I left I had not done any of the construction work that was designed to accelerate seepage in the way of deepening Bitter Creek except at the ends of the two tile drains I referred to to provide an outlet therefor. At the time I left I observed no particular accretion to the stream by underground seepage in addition to the water furnished to the creek by the artificial drain because on the average the creek was not deep enough to gather any such seepage. I do not think it would take many years for the seepage water to appear in the channel of the creek, for it seems to be a characteristic of the country to fill very rapidly. The underground seepage had not varied the flow in the creek much in that particular locality. Up to the time I left there was probably no supply for the stream above the drains other than its natural supply when the irrigation ended and the waste of water and the surface waste had ceased. I do not recall any seepage water coming into the creek.

CHARLES P. WILLIAMS, called by plaintiff, testified:

I live at Denver. My occupation is Civil Engineer. I was educated at the University of Missouri, receiving there the degree of Bachelor of Science. Since 1890 I have been with the War Department as a Civil Engineer, and after that in 1904 I became attached to the Reclamation Service as engineer. I worked first on the Shoshone project in the years 1904 to 1907, then on other projects of the Service, then on the Shoshone Project in 1910 to 1912 as Project Manager. Since that time I have been connected more or less with the Shoshone Project in the Supervising Engineer's office in charge of the Northern division and afterwards as
220 Senior Engineer on the Northern division and now as Assistant Chief of Construction. From 1904 with the exceptions noted until the present time I have been familiar with the Shoshone Project. I first visited this Project in 1904 and from then for the next three or four years I was located there. I was Project Manager in 1910, '11 and '12. I am familiar with the Project, its construction and its water rights.

I can best illustrate the principal features of the project in connection with this map, plaintiff's exhibit 20. The solid, heavy line represents canals constructed by the Reclamation Service; the dash line lateral canals constructed by the Reclamation Service; the double lines with dashes represent private irrigation ditches and canals; the dash and three dots natural drainage channels or intermittent streams; the dash and two dots natural drainage used as a carrier; the double red lines represent open drains and the single red lines tile drains; the green area is covered by canals already constructed; the blue area is covered by canals now under construction; the yellow area is covered by proposed canals already determined upon; the line designated by an arrow on the map represents a drainage area tributary to Bitter Creek above what is known as the forks of the creek which is just above Caldwell's private land. It is designated on the map "Boundary of Drainage", "Area Tributary to Bitter Creek", "Above Caldwell's Diversion." This line branching from that line (indicating) represents the boundary of the area tributary to Bitter Creek and between the area just referred to and the land of the Lincoln Land Company, which is located right here. The Shoshone Reservoir is built at the forks of the Shoshone River and is formed by a dam located at this point (indicating). This reservoir as now constructed has a capacity of 456,000 acre feet. The

Shoshone River then flows in this course as marked on the map (indicating). The portion of the project which
221 is built at this time is the canal taking out at Corbett Diversion Dam at this point (indicating). Water is conveyed first through a tunnel $3\frac{1}{3}$ miles long and then through a canal following this course (indicating). One branch from this canal is called the Frannie Canal, covers an area which is irrigated at present in the Frannie division and other areas which are to be covered later. That is termed the Garland-Frannie system. In that system the works have been completed for practically the entire area in the Garland division. The green portion on the map is the completed portion and only about 1,000 acres in the Garland division are yet to be covered and works are being constructed at the present time to cover it. For the lower portion of the Garland-Frannie system, works have been completed for about 10,000 acres. Works are under construction for about 10,000 more acres and works are proposed for an additional area of about the same amount, making a total of about 38,000 acres in the Frannie division which is to be covered. The number of acres to be irrigated in each division is 30,800 in the Hart Mountains division; 16,000 acres in the Willwood; in the Garland division 43,400 and in the Frannie division 38,000.

The first water appropriation for the irrigation of these lands did not cover the entire area given above. There were afterwards additional extensions or enlargements on that appropriation. At the time the system was finally settled upon the appropriations did cover the irrigation of all the lands designated on the map. These appropriations include the lands which are in controversy here. These appropriations for the irrigation of these lands cover the entire flow of the Shoshone River including flood flow. One of the appropriations is for the Shoshone Reservoir in an amount of acre feet practically identical with the capacity of the reservoir. The capacity of the reservoir is 456,000 acre feet and the [filing] is approximately the same.

222 By the Court: Can you irrigate Caldwell's land from the system? Ans. We can.

The flow of the river and the appropriations we have from the flow of the river amount to enough water to irrigate these lands. In fact, we have taken the land which we have enough water to irrigate. We could irrigate more land if we had more water. We have appropriated all the water there is for the irrigation of the lands. There were some

appropriations prior to ours. The entire flow of the river along with the flood waters which collect in the reservoir would not be sufficient to irrigate the land we included; that is, the normal flow of the river is not sufficient to irrigate the land included within this project and the normal flow is supplemented by this reservoir which contains 456,000 acre feet when filled. At the present time the water in the reservoir is not available for any land except that included in this project although it could be made available for other lands if there was sufficient water in the reservoir to irrigate them. Garland is marked here on the map (indicating). Byron and Powell are also marked on the map (indicating). The map is drawn to a scale of one inch to the mile and is an accurate map of the system and of the points drained and of the other matters indicated thereon. The creek in controversy empties into the Shoshone at this point (indicating) and this is the line of the creek (indicating). This is a point that has been referred to as a fork of the creek. From that there are two more branches which ramify immediately after leaving this point in various smaller branches. One branch comes in this direction (indicating). I think I first saw Bitter Creek and became partially acquainted with it in 1905. During my first connection with the Project I was employed mostly on designs and it was of course necessary for me to become familiar with all of the features of the project. As I remember, Bitter Creek in 1905-'06-'07—I couldn't say exactly what was the first time I saw
223 it—but my remembrance is that you could drive over any part of this region in here—that is, that these various branches which are so small that you could drive over most of them without difficulty. There were no bridges across them. There was hardly anything that you could call a road. There were sand hills over this entire country. There was no water flowing in Bitter Creek at any time that I saw it. There was no source of natural supply of water for that creek except rain. I am familiar with the climatic conditions there. There was not sufficient rain to produce any flow of water in Bitter Creek, taking into consideration the distribution they have of the rain fall. The rain fall is a little less than six inches per annum distributed over the entire year, and that is not enough to produce any flow except at the time of a very heavy rain fall and that would depend upon the intensity of the rain fall. This country very frequently has very heavy falls of rain. I remember one particular instance. This little short gulch here (indicating) had a measured discharge after a heavy rain or cloud burst of 2000 second feet running for a few hours, but

I suppose there is no water in the gulch probably 365 days in the year. There was not sufficient rain fall to produce any flow in the creek that would run off after the rain ceased. I should think the largest rain fall might possibly last for a day but I do not think there is any probability of its lasting for a day.

The physical characteristics of the banks of Bitter Creek are, when I first knew about it there was a well defined channel along the lower reach. I don't remember as to how far it did extend, but I know there was a channel at Garland and I am very certain that there was not a channel up in this region (indicating). I don't remember where you could say the channel had commenced. It was very difficult to tell even if you went out with the intent to find the place. It is well defined at the lower end and gradually ramified into smaller branches.

224 I am unable to say in inches how much the average snow-fall is in the drainage area of Bitter Creek. The snow fall is included in the record in precipitation which amounts to a total of 6 inches per annum. I don't know how much of this is snow-fall or how much is rain-fall. I would say there is not sufficient snow-fall to produce any flow of water in Bitter Creek in the spring-time when it melts. The snow melts but there is quite a good deal evaporated. Of course this is an extremely arid region. They have evaporation of ice in the region of this creek. Perhaps of the total annual evaporation there might be one or two inches of the evaporation from ice and there would be a larger evaporation from snow than there would be from ice. I could not say how many inches there would be evaporated from snow. Sometimes they will have a snow late in the Spring and that may melt in a very short time, whereas a winter snow would melt gradually. The snow melting gradually would not produce much water to reach Bitter Creek. Of course, there would be some water running into the creek. It would not be sufficient to produce a continuous flow in the creek—that is a flow throughout the length of the creek. It might run in the creek in places but there wouldn't be sufficient to produce a flow [throughout] the creek. There is no other source of water for the irrigation of the lands of this Project than the waters which have been appropriated from the Shoshone River by the Government.

By the Court: Q. Caldwell constructed a dam across this creek down below? Ans. He did.

By the Court: Q. By impounding flood waters, would they have been sufficient to irrigate his land? Ans. There would be no sufficient storage capacity. That dam across the creek at that point would not store any water. The water it would store would be practically insignificant.

225 By the Court: Q. Why? Ans. There would not be any storage capacity. There would not be any reservoir. It is practically a flat, uniform place. The general slope of the country is about 30 feet. There is no storage basin there which would make a practical reservoir site.

I was not on the project when seepage first began to appear. I was there shortly afterwards, in the Winter of 1910. When I went there as Project Manager; there was a considerable area of seeped land. I think I was there before that when there was seeped land but I could not state that positively. At that time as Project Manager I considered the question of a drainage system. It was very uncertain at that time how comprehensive a system of drainage was necessary. We began the study of the drainage problem at that time and put down a number of pipe wells over the seeped area and bordering on the seepage area with a view to determine the increase of seepage; that is the areas of the ground water and the probability of its spreading, but then we had no knowledge that the extent of seepage would be so great as it is at the present time, although we knew that it was a possibility. Seepage from any construction works is at first greater than afterwards, but the area of seeped land, unless drainage is constructed, usually increases until a certain extent—until it seems to get to a point where it will not increase. My idea when I first went to the project was that it would be necessary to deepen Bitter Creek throughout the length of that territory and to run drains up but not necessarily following these branches, but following Bitter Creek as long as there was a definite channel. In order for the drain to be effective at all, it must extend into the gravel underlying the soil. The gravel usually becomes filled with water up to the top of the gravel layer, and then the water is carried up by capillary attraction into the soil. Unless you get the water plane down below the surface of the gravel the seepage will continue. Whenever you do keep it below the top of the gravel layer it will cure the seepage. Consequently it was necessary to get any drain we put in down to the gravel. I do not remember whether or not the bed of Bitter Creek was down to the gravel. It possibly might have been. Possibly the portion

of it down through here (indicating). I don't remember about that but I do know it was not down to the gravel up through here (indicating) with possibly one exception. I found one place where it was just down to the gravel. I found it up here (indicating) but it did not extend into the gravel and in order for it to be effective it had to be continued down into the gravel. It was necessary to lower Bitter Creek to the depth to which it has been lowered in order to make it an effective drain. That ditch was constructed in accordance with the plan made by the engineers of the Reclamation Service and in accordance with the best practice of engineering but the construction of the ditch should have been continued. It is the plan of the Reclamation Service to continue the deepening of Bitter Creek. When I went to the Project as Project Manager in 1910 there were no drains built at that time except one small supplemental drain not deep enough and we afterwards deepened it. Then we got up the first plans for drainage ditches. It was very uncertain as to the amount of water that would be carried by these ditches so it was decided to make the first one an open drain and the contracts for those open drains were let sometime in the Fall of 1911. I remember the contractor attempted to work during the winter of 1911 with not much success. Drain A was built at that time. Drain D, this East and West Drain C, these drains F and E, were all of the open drains that were built. There was one surface drain extending along in this direction, drain H. Drain C emptied into a dry lake bed. Drain H ran up the lake bed. It was a subsoil drain but it was a part of the system. These were all open drains. Some of the more recent drains are open at the lower end, but the larger drains built since I was there are closed tile drains. It is necessary for economy some-
227 times that a tile drain be open at the end. The only open drain that passes through Caldwell's place is the deepened Bitter Creek. I do not know why the lower end of Drain N is open, except that such drains are ordinarily left open at the end because they carry too much water to make a closed drain out of them. A large number of tile drains have been constructed. There is a very extensive system. Drain L runs parallel with the railroad track. North of the track is Drain J, Drain K, Drain M, Drain Z, Drain L. Drain P, all of which have ramifications. We have already drained the South part of what is known as the Garland division. We are now constructing other drains in the Northern part. We have just started on that. But the seepage is increasing; the ground water is rising in the Northern portion and the

water users of the Project voted an additional amount of \$12.50 an acre for additional drains that are just beginning to be built. Up to this time we have spent considerably over \$500,000 for drain work on the Garland Division of this Project. I do not know what the cost is for the deepening of Bitter Creek up to this time. (Plaintiff's map, Exhibit 20, is introduced in evidence).

The people on the Project by taking up homesteads secure water rights from the project by virtue of these homestead lands having a water right included with the entry, they being obligated to pay the construction charges. Private land owners would make water applications which would provide for their payment of construction charges. The lands in the Garland division were opened in several units, having different charges. I am not certain whether Caldwell's land is in the first or second unit of the project, but the value of the water rights for these units differed only by \$1.00 in the charge. The cost to Caldwell for a water right from the project would be approximately about \$80.00 an acre including the irrigation work and the amount included for drainage. It would be paid in 20 annual

228 installments, but not the same installments every year. It would be less in the earlier part of the period and greater afterwards without interest. The basic present worth of it would be about half of \$80.00. He would also have to pay an annual operation and maintenance charge, which has been, if I remember rightly, an average of about \$1.00 an acre for the Shoshone Project, but I think higher the last year. It would be somewhere in the neighborhood of \$1.00 or \$1.25 an acre for operation and maintenance charge to be paid annually. The water right furnished by the Government is a perpetual water right and a sufficient water right for the irrigation of these lands.

Cross-Examination.

There are approximately 50,000 acres of land in this project under irrigation, at this time. The total area of the project would be about 135,000 acres as it is now outlined. No construction work or work except surveys has been made on the Hart Mountain division above Garland or upon the Willwood. The construction that may be undertaken upon this additional work is to some extent at this time problematical, but there is no question but that they will be built some time. They have been approved as extensions that will

be definitely made in the future. The beginning of the construction of these units is contemplated as soon as we get the money to do it. The projects have to take their turn about money. One-third of the Frannie Unit has already been built and another third is now constructed. Probably that third of the Frannie Unit will be the first to be completed when there are additional funds. The total acreage of the Frannie and Garland units is about 82,000 acres. The future development of the project will be slow both in construction and in development and irrigation of the land. Practically all of the Garland division is now completely under irrigation. It was opened in 1908. It is hard
229 to tell when final settlement was completed. Practically all of the land has been entered for some time but there is some not yet entered. I think about 8,000 acres of the 10,000 under the Frannie division have been entered. I would think about 50% of the land entered has been irrigated this year. The use of water upon the completed project will depend upon whether we get the money to complete the work expeditiously or not. If we are limited to the Reclamation fund, it will probably take quite a while. If we get additional appropriations which now seems probable it might be completed much sooner. When we continue the development of the system and extension of the use of Water upon it, the requirements of the old completed portions become less. We consider the final duty of water on the Garland Flat to be about two acre feet per annum. That includes provision for the re-use of water. The provisions we have in mind for the re-use of water are these: The Garland Canal and Corbett tunnel were both built for a capacity which was considered to be sufficient provided all of the water diverted was used except such as would necessarily be lost by seepage from the canal—that is, we expected to use all the water which is wasted, which is surface waste from the irrigation, and that amount is about 10% of the total diverted. The surface waste at the time of maximum use which runs off into Bitter Creek is a little over 100 s. f. so that if we should lose that surface waste, we would lose about 10% of our diversion and our diversion is designed for using the entire amount diverted except such as necessarily escapes through the subsoil. We have already constructed two canals for using some of the surface waste. They take out of Bitter Creek. One takes out, if I remember rightly, about North of Powell, and the other somewhat lower down. It is what we designated as laterals C and D. I don't remember when they were constructed. They were

230 constructed some time after the main lateral system was built, although we have contemplated using this entire diversion. We have never had a necessity of doing so until recently because we had abundant water in our canal. Laterals D & C are both main laterals from the Garland Canal, but these canals I am thinking of take out of Bitter Creek. I think they are not shown upon this map at all. They are not our laterals C and D. I don't know how they are marked. There are two that have been constructed. I don't know their names. I do not know whether one of them was constructed on Mr. Ide's land or not. I have seen Mr. Ide's land, but I would not be able to identify that on the map. I don't know when the plans were agreed upon or the construction of these canals. I know they were definitely agreed upon. There was one of them—I don't know which it was—was tentatively agreed upon, if I am not mistaken in 1916. I am not positive about that.

The final duty of water will be approximately two second feet per annum. On that basis we do not consider that our appropriation from the Shoshone River is inadequate. I did not say there was not enough water in the Government appropriation in the Shoshone River to irrigate the entire project. I said there is about enough water. The total project when completed will be, if I remember rightly, 135,000 acres. Our reservoir has an annual storage capacity irrespective of any diversion from the tracts below of more than 450,000 acre feet, but there will be losses after it leaves the reservoir, in passing down the canal. The best that can be hoped if we conserve all the water that is diverted—if we make every attempt to conserve waste water and saved water—we will still probably lose 20 or 25% in the canal system itself, considering inevitable loss which we cannot reclaim. I will have to figure out whether with even that loss we will have water left in an amount better than two acre feet per acre for the entire tract. Of course we have losses in the Shoshone Reservoir and considerable loss there in evaporation and as near as I could say the whole
231 supply would be about sufficient for the area it is planned to be irrigated, considering, of course, that there are other irrigation systems from the reservoir which use part of the supply. In addition to the reservoir appropriation we have also an appropriation from the direct flow of the Shoshone River which is one of the largest rivers in Wyoming with its head waters in the Continental Divide in Yellowstone Park. This reservoir for the project is the only

reservoir appropriation on the river that has been constructed. We have of course at this time with only 50,000 acres under irrigation many times as much water as we require considering the fact that we draw on storage. It has been cheaper for us to deliver water through our direct system than to try to re-capture it at this time, but we have been unable up to the present time to deliver sufficient water without re-capturing any and we find it economical so to re-capture water. Re-capturing water is not always necessarily an expensive proposition. It might be less expensive to re-capture it than to bring water from a considerable distance; that is, if we would have to carry water, 1,000 second feet, through a long canal and build a tunnel to carry that amount and we should lose then 10% of that, it would be very much cheaper to re-capture that 10% than to enlarge our canal system to make it carry that much more. We have not an abundant capacity in our works; the capacity was designed such as to be only sufficient to irrigate that amount of land. I do not know whether you could say we have this year an abundant capacity or not, or an abundant supply. A good many of the water users complained that we didn't have sufficient capacity this last year, but we hold that we have because the average use of water could be reduced somewhat from what it is now. We have the same experience upon this project as in all reclamation projects.

232 The tendency of the farmer is to use more water than is beneficial. That accounts to some extent for the seepage trouble. We would have had seepage on the Shoshone Project even with the most economical use of water that could be expected. As to whether the amount of water Mr. Caldwell uses upon his land or the amount that is used through the Garland town or city ditch jeopardizes the project, I can answer by saying that the amount of water which any one farmer on the project would use would of course have a very small effect on the total amount of the water used. That would be true of any individual place on the project. It would be [cumulative] of course. As to whether the natural flow of Bitter Creek would be wholly unimportant from the standpoint of the project, I answer by stating that there is no natural flow of Bitter Creek. The flow that is in Bitter Creek is practically all surface waste; that is, a very large percentage is surface waste and there is some seepage water. Bitter Creek has had water in it before the construction of the system, but that was at the time of rains. Such flow at the time of rains is unimportant as an irrigation supply either to our system or to anyone's

else. At no time has it contemplated that such flow of water in Bitter Creek resulting from such rains should be used upon this project.

My earliest acquaintance with Bitter Creek was Northwest of Powell. I have seen the lower part of it but not very often. I am familiar with Mr. Caldwell's land and the point where the forks come together. It is rather difficult to tell where the well-defined channel of Bitter Creek begins. It is well-defined at its lower end. As I remember, it has been [well defined] up to some distance above Garland. I am not able to say just how far. At the present time the South fork is rather well defined for some little distance below Mr. Caldwell's place. I don't think it could have been well defined very far above that when I first knew it, but I don't

233 know whether it was or not. It is pretty difficult to tell where it ceased to be well defined. In the territory Northwest of Powell it is made up of many small branches, more or less distinguishable and gradually collects into two main branches which finally become distinguishable and well defined. It is well-defined and has been for some time above Mr. Caldwell's place. Since I first knew this channel, it has been known as Bitter Creek. It is the only drainage channel for Garland Flat but not for Garland Bench which is North and Northwest of Garland Flat. I cannot give you the number of drains that have been constructed in this project North of the railroad. There are a considerable number of them, considering the various branches. I don't know whether there is an open drain North of the railroad excepting the Bitter Creek drain across Caldwell's land. Most of the open drains are South of the railroad. There is a one-tile drain South of Garland which at the lower end for some distance is open. There is one South of Garland, drain A; the lower end of that for about two miles is an open drain. It drains into Bitter Creek at this point and here is another drain, drain C, the lower end of which is an open drain. The last drain is L. Drain N crosses Mr. Caldwell's land and I think it was a tile drain up to the boundary of his land. All of the branches of that drain, I think, entered it above that point (indicating). As to whether the entire capacity of the drain had been fixed at a point above his land and no added amount of water was to enter the drain I am not certain, but I don't remember of any entering it below the point where it enters his land. That does not necessarily fix the capacity because the tile drains take up water throughout their entire length. It would fix

the capacity but it would not fix the flow necessarily. I do not say that economy is the only object in leaving the drain open. It is usually the result of the capacity being limited, and the necessity of carrying more water than is economical to build a tile drain for.

- 234 The Government did for a while irrigate some alfalfa. I don't know whether that is done now or not. It was where we raised hay for our animals. It was started rather as an experiment or demonstration on a comparatively small tract. This last season there were some of the public lands that were farmed in order to increase crop production, but that was not general. In one sense, whatever water reaches such a channel as Bitter Creek, is either from surface waste or underground seepage of water which the government has sold to settlers who have used it upon their land. The drop of the country running in the direction of the railroad is about 30 feet to the mile. Between the railroad and the river it drops in benches. I don't know what the slope in that direction is. I think there is no greater aggregate fall along the course created by Bitter Creek. There may be a greater aggregate fall where Bitter Creek crosses the railroad, but I don't know what the fall would be from the point where the railroad crosses Bitter Creek to the river. It might be more. I don't know what the fall of our main canal is between drops. There was a number of drops which were necessary to take up the surface fall of the country. A grade of less than three feet to the mile is adequate for a canal of that size. There is no question but that the grade of Bitter Creek is sufficient to carry off any amount of water that might be put into it. The deepening of the channel of Bitter Creek would have the result of getting the bottom of the creek below the surface of the gravel so it would pick up from the saturated gravel sub-bottom. It had also the effect of making our other artificial drains effective. It was necessary for us to get our tile drains down into the gravel wherever they could be reached at a practicable depth. They being below the gravel would necessarily cause us to deepen Bitter Creek where they would enter into the creek in order to get outlet enough for the tile
- 235 drain. That was done in several instances several years ago before we deepened the creek. The more recent deepening of the creek was not intended to facilitate those drains but there were additional drains contemplated running into Bitter Creek. The Powell drain would end at Bitter Creek and it would be necessary to deepen Bitter

Creek in order to take care of the outlet. We had to go into the gravel to accelerate the underground seepage. I don't know the depth of the gravel in the upper end of the creek. I think it is very likely that they cannot reach the gravel there and probably they have not reached the gravel throughout the entire area now where they have deepened it. The drains would have to be very much closer together where they are not underlaid with gravel. The movement of this subsurface seepage through the ground is not constant but varies, being greater at one time than at another, but it is continuous. If the work of deepening Bitter Creek to the gravel has any beneficial effect and accomplishes the result we wish, there would be a continuous flow of water in that stream from that source and there is a continuous flow now, a small amount, I do not know how much, but there is a continuous flow now at the lower reaches of Bitter Creek. I don't know how far up that extends. As to whether that is my conclusion, or should be the results, or whether I know it is true, I can say that there is a flow in these outlet drains during the Winter in such of those as empty into Bitter Creek. There would be a flow in the creek provided it didn't freeze up. Some of our work has been performed up above where the tile drain enters Bitter Creek itself and I think they extend out through Mr. Caldwell's property. It was not the only purpose of that work to enable us to reach this gravel bed to accelerate seepage. The upper part of Bitter Creek may not reach gravel, but the work will be necessary on account of the other drains we are going to build on the North part in order to get an outlet for these
236 drains and also to serve as a collective drain in addition to those other drains. This work through Mr. Caldwell's land would be necessary to accomplish our purpose. Otherwise we would not be able to perform the work above his lands. As to the necessity of deepening Bitter Creek through Mr. Caldwell's land with the result of leaving his headgate high and dry, it was always my idea that it was necessary to construct a drain practically along the line of Bitter Creek channel, and that being the lowest line, it would be the natural place for the drain, and the drain should be about 10 feet deep throughout the entire length in order to be effective. We do not contemplate building any more drains across Mr. Caldwell's land. I am not certain about whether the deepening of the channel through Caldwell's land was only for the purpose of facilitating the drainage above. My understanding is that the entire creek has been deepened or will be deepened to act as a drain. I don't know

whether or not there is an inverted siphon on Lateral D across the creek below Caldwell's place, but I think there is a siphon there. I don't remember the details. I don't remember whether there was any value in lowering the bottom of the ditch above that point, when we first fixed our level by that siphon. I don't remember the details of the construction of that siphon, whether it was planned to make any change there or not. I don't know how much that siphon you speak of would be above the bottom.

This bench and these Flats have been irrigated for 11 seasons now. As far as the Southern portion of the Garland division is concerned, I should think it might be said that the sub-surface seepage has been pretty well established. I don't know that I could answer very accurately when the water is usually turned into the distributing canals, but I think about the first of May and I think possibly they distribute water until about the first of October. I was not the engineer who prepared the applications made by the
237 Reclamation Service for an appropriation from Bitter Creek filed about December 31, 1910. I was in charge of the project at the beginning of December, sometime in December, 1910. I knew about the applications, but I didn't prepare them. I don't remember enough about those permits to tell whether it stated what canals or what the statements show in regard to the canals. I didn't prepare the permits. There have been two canals constructed to enable us to divert water from Bitter Creek at the same time we are deepening for the purpose of increasing its flow or depth. I don't know whether there is any place for an additional canal or not. I presume we have to raise the water in the creek in order to get the water out in these two laterals, but I could not say certainly about that. I don't know whether I have seen the details of the diversion or not, but the probabilities are that those canals would operate only at such time as they were necessary for the additional quantity of water, and that the diversion works would be arranged so that at other times the channel could be opened up and any impediment to the flow removed. Of course if it is possible for the government to make such a diversion without interference with the drainage, it is also possible for Mr. Caldwell to make a like diversion, but he would take water for a longer period. He would want to irrigate from his works at other times than at the time when there is a maximum requirement for water, whereas we would have sufficient water in our canal at ordinary times to supply all

the land without taking water from the creek. I think it is this second or lower lateral constructed from Bitter Creek by the government that isolates the headgate of the Lincoln Land Company in the Garland townsite ditch. I don't know whether it was constructed last year or the year before. I think prior to the construction of that lateral the government had done some work at that location, digging a ditch around the Lincoln townsite headgate but I am
238 not familiar with the work. I don't know whether that work was incorporated in the final construction of the lateral or not. I don't think it was, but I don't know.

Re-direct Examination.

When I used the term surface waste I mean that waste which flows off of the land over the surface of the land and enters Bitter Creek without permeating the soil or flowing into the creek by flowing through the soil. The drainage canal was constructed for underground drainage but the surface waste is included in the water collected in this canal to be used for irrigation purposes. I use the word subsurface water as being the same as seepage. I use that term to indicate that it is distinct from the surface run-off and surface waste. We re-capture the waste water in surface drainage and the seepage water into this deepened Bitter Creek. As to the expense of turning that water into the canals which have been constructed for the purpose of carrying it to other land, there is no expense except in the construction of these two canals which we have built for that purpose. This is a comparatively small expense. These canals have all been constructed. They are in effect laterals for the purpose of carrying this re-captured water to the other lands of the system for the purpose of using it for their irrigation—and there is no further expense to it excepting the headgate and that expense would occur in any case if they irrigated the land under the canals.

DANIEL W. MURPHY, called by plaintiff, testified:

I live at Los Angeles, California. I am a Civil Engineer by occupation. I am a graduate of Stanford University and have also studied in other schools in post-graduate work. I have been actively engaged in engineering work during the past 18 years. I have been engaged by the government since 1904 practically all the time. My

239 work since 1911 has been practically all on drainage lines with a few exceptions. From 1911 until 1918 I held the position of drainage engineer and since the beginning of 1918 I have acted in the capacity of Consulting Engineer for the Reclamation Service. My work is drainage engineering embracing practically all the irrigation projects of the government. I have given particular attention to the Shoshone Project. I first took that matter up in 1911. I found that after irrigation was started there was a general rise of the ground water over the Garland or Powell Flats. In 1911 this rise of ground water had affected a considerable portion of the irrigable area. A study of the conditions extending over several months led me to the conclusion that in order to protect the land, it would be necessary to construct a drainage system which would effect a general lowering of this water table over practically the entire irrigated area. Mr. Stebbins, Project Engineer, and Mr. Iakisch, one of his assistants, assisted me in [connecting] the necessary data in the field and in working out a drainage plan. In 1912 a general drainage plan for the Flat was outlined, consisting of a series of nearly parallel drains. One of these drains might be called Bitter Creek or the deepening of Bitter Creek. Bitter Creek also served as an outlet of all of the drains lying North of the railroad and some South of the railroad. This outlined plan was formulated in 1911-1912. The details, however, were not all worked out at that time, but have been worked out as construction progressed since then, and are still being worked out. The deepening of Bitter Creek constituted a part of the drainage system at the time I took hold of the matter in 1911-'12. I made these plans as a member of the Reclamation Service and as an engineer of the Reclamation Service. I considered the deepening of Bitter Creek necessary or some equivalent which would be the construction of another channel equivalent to Bitter Creek. Had such another
241 channel been constructed, it would have been in the near vicinity of Bitter Creek. Bitter Creek is a natural location for one drain for the reason it is the lowest point between the lands on the extreme Northern point of the project and those on the Southern side. Bitter Creek is a depression. I have been connected with the establishment of this drainage system up until the present time. I planned the drain known as Drain N, the lower portion of which goes through the land of Caldwell, involved in this suit, and the lower portion of which is an open drain and this was necessary for the reason that the lower portion of

that drain is on a flat grade. This flat grade was necessary in order to get into Bitter Creek, and it was not practicable with the size of tile which we were using to put a tile drain in of capacity sufficient to carry these waters to Bitter Creek. The grade of the lower part of that open portion is about half that above where the tiles were placed. There are two reasons why it was necessary to deepen Bitter Creek. One is to make it an outlet for a great many other drains on the North side of the Project and another is to act as a drain for relieving the lower or ground water on lines adjacent to the creek itself. In order to make a drain effective, it must get down below the depth to which it is necessary to maintain ground water. It is also necessary to get it into some material that will carry some water to the drain. There is some drainage into Bitter Creek from the Caldwell land. How much it is impossible to say, because Bitter Creek through his land was deepened only for a relatively short time, only a few months, and what the ultimate effect will be it is impossible for me to state at this time. It was intended to drain those lands. (No cross-examination).

242 The Plaintiff offers in evidence a certified copy of the report of the Board of Army Engineers appointed for the purpose of making an investigation and recommendation relative to the reclamation of arid lands and an examination of the various projects, the portion of this report offered being that part dealing with the Shoshone Project relative to the use of the seepage, drainage, percolating and waste waters in this system for the irrigation of other lands after they have once been used. The report was made in 1910 and the plaintiff offers in evidence paragraph 23 on page 154 and paragraph 10 on page 197. These paragraphs were admitted in evidence without objection and are the same as that read into the evidence in the deposition of George C. Sanford following:

Plaintiff offers in evidence the second paragraph under the heading of "Irrigation Plans, Shoshone Project" found in the annual reports of the Reclamation Service at Page 255 of the 12th Report, page 318 of the 13th Report, page 314 of the 14th report, page 488 of the 15th report and page 366 of the 16th report, all of which were received in evidence without objection and are the same extracts as those read in the evidence of George C. Sanford following, and are as follows: "The United States claims all waste,

seepage, spring and percolating waters arising within the project and proposes to use such water in connection therewith."

243 Thereupon solicitors for parties in this cause entered the following stipulation in open court:

Stipulation.

It is stipulated and agreed by and between the parties hereto that the allegation under Plaintiff's complaint in paragraph 2 thereof: "In connection with the construction and development and operations of said proper the United States has withdrawn from entry under said act and the act of August 30, 1890, extensive areas of land in Park and Big Horn counties aforesaid, including land in Townships fifty-five (55) and fifty-six (56) North of Range ninety-nine (99) West, and in Townships fifty-five (55) and fifty-six (56) North of Range ninety-eight (98) West of the sixth principal Meridian," is admitted by the defendants to be true and that no proof of allegation be produced at the hearing of this case.

GEORGE C. SANFORD, called by plaintiff, testified by deposition:

My name is George C. Sanford. I live in Powell, Wyoming. I am by education and occupation a Civil Engineer. I graduated in 1895 in the course of Civil Engineering at Worcester Polytechnic Institute in Massachusetts. I was first employed by the Metropolitan Water Board in Massachusetts on the development and storage and conveyance of water to Boston and vicinity for domestic purposes and remained in their employ in the Engineering Department until March 1, 1905. I then accepted employment with the Reclamation Service and have been with it continuously since then. I was first assigned to the Buford-Trenton Project, North Dakota, in charge of surveys, and investigation, and later in charge of construction work. In 1908, I was transferred to Williston, North Dakota, and remained in charge of North Dakota pumping projects which included [Willisron] and Buford-Trenton until the Fall of 1910.

244 I was then transferred to the Milk River Project in Montana and remained there as Project Manager until

June, 1913. I was then located at the office of the Reclamation Service in Great Falls, Montana, and my special duty was looking after operation and maintenance work in the Northern Division of the Reclamation Service which includes the Projects in Montana, North Dakota and Northern Wyoming. On March 1, 1914, I was assigned to the Shoshone Project as Project Manager, where I have remained up to the present time. I am a member of the American Society of Civil Engineers since 1906. I have had constant experience in engineering and irrigation such as is required on the Project during the last 10 or 15 years and have been engaged continuously in engineering work since my graduation at Worcester. I am consulted by various Boards and consulted in connection with other projects than this.

My first trip to this project was in November, 1909. I was here for a period of 4 or 5 days perhaps. I came for a conference with the constructing and operating engineers of the Northern Division held at Powell, Wyoming, and for discussing the various problems that arise in connection with our work and exchanging our experiences. The development of the Shoshone Project was taken up in some detail as we were here on the ground. I made no examination of this project at that time but I visited the head works at Corbett Dam and looked over the canal system on the Garland Division. I have been in charge of the construction and management of this project since March 1, 1914. The Shoshone Project consists first of storage works in the Shoshone Canyon and the Shoshone Dam, where the water is held for the irrigation of nearly 140,000 acres of the Project lands, the Shoshone Valley in the vicinity of Cody, Ralston, Powell, Garland, Frannie and Deaver. The Project is divided into four principal divisions. The first which is

nearest Cody, commonly known as the High Line or
245 Hart Mountain Division, comprises about 38,800 acres.

Next in order on the North side of the river is the Garland Division which contains about 44,000 acres and on the South side of the river there is the Willwood Division which has about 15,600 acres. To the Northeast is the Frannie Division which contains about 38,000 acres. The principal construction works are Corbett Diversion Dam which is located about 15 miles West of here. The water is diverted into the Corbett Tunnel which is about $3\frac{1}{4}$ miles long and has a capacity of about 1,000 cubic feet per second. It thence flows down the main canal through the equalizing reservoir at Ralston and water is delivered to the Garland Division, which is located around Powell, and is also carried through

the Frannie Canal to the Frannie Division. The works have been completed for the Garland Division in their entirety and about 60% of the Frannie Division completed. At the present time the cost of the works is something over \$5,000,000, and it is about 56% completed as far as money expenditure is concerned. As far as irrigable lands are concerned the canal system is just about half completed. There still remains to be completed a portion of the Frannie Division, all of the Willwood Division, and all of the High Line Division. In addition to the lands in the Shoshone Valley, itself, it is possible to convey water to lands in the Clark Fork Valley by an extension from the High Line Canal and the delivery of water to a tract of about 38,000 acres of land segregated under the Carey Act under what is known as the Hubbard Canal. The Reclamation Service is also investigating the lands under what has been known as the Oregon Basin Project, which heads about 12 miles Southeast of Cody and continues in an easterly direction for about 40 miles to the Big Horn River North of Germania, and investigations and surveys are now under way to determine the feasibility of irrigating that tract of land

246 from the Shoshone Reservoir.

Prior to the beginning of the construction of the Shoshone Project, plans were made out in considerable detail for the irrigation of these lands and these plans have been followed and construction work has been continued as fast as funds were available and it was found necessary to open additional lands to settlement. The plans for the construction of this system were approved by the Secretary of the Interior of the United States and I have seen the approval stamp of the State Engineer on many of our record plans but that was prior to my connection with this project. Surveys and investigations were started in 1903 according to the records of the office. Construction work on the Shoshone Dam, Corbett Dam and Corbett Tunnel was started in 1905. The construction of the system has progressed continuously since those dates. As fast as a unit of the system could be opened it has been opened to settlement and water delivered upon the land.

The records of my office show that exhaustive examination into the topography of the country and the water of the country was made prior to the beginning of construction. This examination has continued and kept pace with the construction of the project since I have been in the Reclamation Service. In connection with the construction of

this Project it was contemplated that canals and ditches should be constructed to convey the water to the individual parcels of land to be used by the farmers. When the works were first constructed there was no definite plan for the construction of drainage works. That arose with the development and irrigation of the project, and those plans were made at a later date. In the early days I don't think drainage was given much consideration. I mean by the early days from 1905 up to 1909 and 1910. It wasn't con-

247 contemplated that there would be a large amount of surface waste. We didn't design the system with that idea in mind. Our idea was to apply it to beneficial use. I mean it was contemplated that whatever surface water there was running off the irrigated land would be recaptured and used again. It was in fact contemplated that there should not be permitted any waste or seepage water to run away in the utilization of the water on the project. This fact has been published in the annual report of the Reclamation Service since my connection with this project and as I recall as far back as 1912. But I can't be certain until I verify it. I have a copy of the report of the Board of Army Engineers upon the Shoshone Project. That report mentions the utilization of waste and seepage water for the further irrigation of lands under this project. I have a copy of this report of the Army Engineers dated 1912. This book marked Plaintiff's Exhibit No. 2A entitled "61st Congress, 3rd Session, House of Representatives, Document No. 1262," and further entitled "Message from the President of the United States transmitting Report of the Board of Army Engineers in Relation to the Reclamation Fund," is a report of the Board of Army Engineers, upon irrigation projects of the United States under the charge of the Reclamation Service. A portion of that report has to do with the Shoshone Irrigation Project. It begins at page 150 of said book, denominated Section 26 and continues over said pages to page 155 of said book.

By Mr. Rigdon: Now, I desire to read in evidence on page 154, paragraph 23.

By Mr. Kerper: We note an objection for the reason that it is immaterial; for the reason that it is not the best evidence; and if the best evidence not proper to prove.

By Mr. Rigdon: Paragraph 23: "It is thought that the High Line Canal should be constructed before the Willwood on account of the conditions under which a large part
248 of the water rights were acquired by the United

States, the better existing railroad facilities, the approximate equal cost per acre and the fact that the seepage water from the upper unit that returns to the river can be used on the lower lands." (Defendant moves to strike for reasons above given).

The army engineers visited the project in the Summer of 1910 and their report appeared shortly thereafter. The exact date I cannot state without looking. It appears in the report that the letter transmitting the report to the President is dated November 26, 1910.

(Plaintiff offers in evidence paragraph 10 on page 97 of said report relative to the water supply of the Shoshone Project which offer is objected to as not the best evidence).

By Mr. Rigdon: Section 10 referred to is as follows: "This statement also takes into account all waste water or return seepage out of 164,000 acres of irrigable land on the Shoshone Project; 100,000 acres will drain towards the Shoshone River and discharge into it above where the several canals take out so that this return water will be available for use."

Plaintiff's exhibit No. 3A is the Twelfth Annual Report of the Reclamation Service for the period 1912-13, made by F. H. Newell, Director, and a report relating to the construction and development of the Shoshone Project begins at page 254 of this Twelfth Annual Report and continues to page 262, inclusive, and contains the following at page 255 (which plaintiff offers in evidence):

"The United States claims all waste, seepage, spring and percolating water arising in the project and proposes to use such water in connection therewith."

(Objected to by defendant as immaterial and not the best evidence).

The above report was transmitted to the Secretary of the Interior under date of October 4, 1913, and is the report for the years 1912 and 1913. To the best of my recollection, every annual report of the Reclamation Service since then contains the same statement with reference to the Shoshone Project. Plaintiff's exhibit No. 4A is the 13th Annual Report of the Reclamation Service for the years 1913 and 1914, and contains a report on the Shoshone Project on pages 317 up to and including 324.

Plaintiff offers in evidence the statement contained on page 318 of said report relating to the Shoshone Project, as follows: "The United States claims all waste, seepage, spring and percolating water arising within the project and proposes to use such water in connection therewith."

(Objected to for immateriality and as not being the best evidence).

Plaintiff identified in like manner the 14th, 15th and 16th Annual Reports of the Reclamation Service and offered in evidence from each report in the portions thereof referring to the Shoshone Project the following statement, being in the same words in each report, found at page 318 of the 13th report, 314 of the 14th Report, 488 of the 15th Report, and 336 of the 16th Report, to-wit:

"The United States claims all waste, seepage, spring and percolating water arising within the project and proposes to use such water in connection therewith."

Defendants object on the ground of immateriality and not being the best evidence. The same statements in these reports were offered by the plaintiff at the close of the examination in Court of Plaintiff's witness, Daniel W. Murphy, and were admitted without objection.

Witness continues: The 16th Annual Report for the years 1916-17 is the last report that has been published. The [narrative] statement for the Shoshone Project for the 17th Annual Report has been prepared by this office and of course is [already] for transmission. That report when it left my office contained a statement identical in language with the statements in the other reports relative to the seepage, spring and percolating waters.

I am making that claim as Manager of this Project
250 on behalf of the United States for all of the seepage waters.

This exhibit, Plaintiff's No. 8A, I have, is an official map of the Department of the Interior and the United States Reclamation Service of the Shoshone, Wyoming, Project. It is correct in all important features. Some slight changes have been made in the irrigable areas shown on this map; otherwise it is substantially correct. Since that map was made there have been other areas added to the irrigable land and some subtracted, but it shows the general outline and area of the Shoshone Project.

Plaintiff offers in evidence Plaintiff's Exhibit No. 8A (no objection).

Witness continues: The management of the Reclamation Service has contemplated the re-capture and use of the seepage, spring, percolating and waste waters of the system ever since I first became acquainted with the system and became connected with it. After the lands on the project have been irrigated for a few seasons they become what is called seeped and boggy, and water-logged, if not drained. They first became seepy and boggy prior to my assuming the management of the project.

The first plans contemplated for the drainage of the project lands provided for the construction of open drains as shown on the official records of the office. The work was advertised, contracts were awarded for the construction of such drains and they were in part constructed. That was about in 1911 that work was initiated. In about 1912 further investigations were made and the drainage system outlined contemplated the construction of closed tile drains located at a depth of from 8 to 9 feet below the surface for the purpose of removing the surplus water in the soil. This plan has been carried on continuously ever since that time and since my connection with the project. At times it has been necessary and advisable to use the open type of

251 subsurface drain, but most of our work is tile drains. Tile drains have a definite capacity but where we have large quantities of water it is not feasible to construct tile drains, so we resort to the open drain which will carry practically an unlimited quantity of subsurface water. In flat lands the carrying capacity of tile drains is reduced so it is necessary to resort to the open drains to remove the water developed. I have a map or plat showing these drains as they were constructed or proposed to be constructed. The plan includes the construction of a center or trunk drain to carry the water collected in the various drains to the Shoshone. The topography of the country makes it necessary. Plaintiff's exhibit No. 9 is a blue print of a topographical map of the Garland Division of the Shoshone Project which is indicated by the full white lines the subsurface drains, which have been constructed both open and closed, and by the broken lines the proposed drains that are still to be constructed in order to protect the irrigable area of this division. It shows a portion of the central or trunk drainage canal, by a full white line. That was deepened in 1914 and 1915. This blue print does not clearly indicate

the section of the main trunk drain above that point (indicating) because it didn't come out in the process of blue printing, but it is on the original and the ends of the project drain show about where that is located.

Plaintiff offers in evidence Plaintiff's Exhibit 9 (no objection).

Witness continues: The construction of this central drain was started in the Fall of 1914 and continued throughout the season of 1915, but plans for it were started prior to my connection with the Project. As I recall, the surveys and investigations for it were first started in 1912. Some of the drains upon the system for the drainage of these lands were built before I began the construction of this central drain. All the drains were located according to the best irrigation engineering considering the topography and necessities of the system. We got the best advice in the country on that point. This central drain begins at a point on the easterly side of Garland townsite and follows thence in a Northwesterly direction through the lower portion of the project lands and was at the time we were constructing it an old wash generally known as Bitter Creek. That was the natural and proper place, in my judgment, for the proper location of this drain.

This central drain serves also for the purpose of removing the surface waste; that is, irrigation water that flows from the farms; and in periods of storm and heavy cloud bursts, it removes the storm waters which drain from the project lands. Since we have deepened and improved it, it also acts itself as a drain to the lands which Adjoin its banks. It also serves as a canal for the conveyance of water for the irrigation of lands further down the project. The so-called South branch of Bitter Creek has a more or less constant flow during the irrigation season, and the service has constructed a diversion dam and a canal to take this surface waste out of Bitter Creek and return it to the canal system where it can be applied to beneficial use. In addition to this it has this season constructed a second canal for the purpose of re-capturing the waste and seepage waters of Bitter Creek and returning them to the main canal where they can be applied to beneficial use in the extreme easterly end of the project. There are now vacant lands which are susceptible of irrigation from water that can be re-captured from Bitter Creek, and our plans have been made to deliver water to such lands from this source. The

flow of water in the North branch of Bitter Creek comes almost entirely from surface waste. That branch is not deep enough to intercept very much subsurface flow; but the second canal which we have constructed is so located that it can re-capture the waters developed by the subsurface drains. This ditch we have constructed in the bed of

253 Bitter Creek is not only a drain ditch but a canal for the purpose of carrying irrigation waters. As to the acreage it is proposed to irrigate from the waters collected in this ditch as surface and waste and drained waters:—the lower canal which diverts from the farm unit of Mr. A. W. Ide will recover water which can be used for the irrigation of a little over 2,000 acres of land; the upper diversion works canal from the South branch of Bitter Creek can probably be availed of for irrigating from 5,000 to 7,000 acres of land. In the further development of the project other canals and drains are contemplated for the re-capture of additional surface waste and subsurface waste, so that it can be applied to beneficial use as these waste waters are developed in the gradual development of the project.

It was necessary primarily to deepen the creek to obtain satisfactory outlets for the numerous drains that have been and are to be constructed. It was not necessary to deepen it along many places simply to carry irrigation water, but the combination of the two was such that a drain was really more important and therefore the creek was deepened and our plans for re-capturing the water were all in conformity with the deeper creek. The primary factor in a drainage system is an adequate outlet. After that has been determined upon the next point is to estimate how much water is to be developed and how it can be taken out of the land and carried away. To do this it was necessary that Bitter Creek should be deepened as it has been deepened upon this project. I am speaking now as an engineer who has had long experience in connection with engineering projects and drainage works. The necessary deepening of this creek in 1914 and 1915 averaged a little over four feet in depth and probably ranged from three to six feet. The work that is now under way provides for a channel that will be from 8 to 9 feet below the surface of the ground and will vary from one to six feet below the bottom of the wash as it stood before we deepened it.

254 I know the location of the land of Mr. Ide involved in this controversy, and the location of the drain and the

ditch which was made through his land for drainage purposes. The ditch was deepened throughout its entire length through his land. The bed of the ditch was deepened at the point where the siphon passes through the ditch upon his land. The bed of the ditch at the siphon was lowered slightly over one foot, but this is not an accurate measurement but was determined by my taking a soil borer and sounding from the top of the gravel down to the concrete. Beyond that we carried on the deepening of Bitter Creek with an increasing depth as we continued up stream until we had reached the normal depth of between 8 and 9 feet. In my judgment the ditch deepened from the siphon in accordance with the plans laid for the deepening of the ditch sufficiently to make it a proper drain. It is true that the siphon acts as a slight obstruction in the flow of Bitter Creek, but this one obstruction was a comparatively small matter to remove, but means the destruction of an expensive structure, and for that reason and also the reconstruction of another structure in order to carry the lateral across Bitter Creek, it was decided not to remove it from Bitter Creek unless it was found by further developments that it was absolutely necessary in order to fully protect the irrigable land in that vicinity; that is, if this deepening of a little over a foot would be insufficient at that point, then it will have to be deepened still further. As Project Manager I have had occasion to examine all the lands in the project frequently and become familiar with the natural conditions upon the project. I have heard the testimony of numerous witnesses here as to Bitter Creek being a creek. There is no constant flow of water in Bitter Creek due to any other cause than the waste and seepage and drain and percolating waters from the irrigation except there will be a short run-

255 off after a heavy shower or cloud burst. There will also be a short run-off after some melting of snow, but that is of very short duration for a period of one day. The run-off would frequently be for less than a day. It would have to rain more than an inch on the water-shed or drainage area of Bitter Creek to produce a run off of a day. Above the Caldwell diversion point the drainage basis of Bitter Creek is about 33 square miles, but this does not include land on the so-called bench that is in this system. It includes the entire area up to the Divide where the water flows North into the Clark's Fork country and is approximately at the top of the high divide North of the Garland or Powell Flats. That area includes the breaks and the slope. It includes all the land that is drained by this creek

above Caldwell's school section. The drainage area above the Garland townsite is about 40 square miles making a difference between the two areas of about seven miles. I do not think there would be any flow of water from melting snows in the spring—not from the slow melting snows up near the bench because that snow would all be absorbed in the ground and some of it would evaporate. The occasion for any flow in Bitter Creek from melting snow would be when this entire Flat would be covered with snow and there would be a chinook which would cause a rapid melting of the snow. As to how long the flow would continue under such conditions is a matter of conjecture. It would depend on the depth of the snow and the condition of the ground in Spring of the year. Since I have been on the project there has been very little flow in Bitter Creek so far as I have observed. I haven't seen since I have been here any flow of water from melting snows sufficient for irrigation purposes. Since I have been here Bitter Creek has always been running with seepage water except at the upper branches of it. I have been on the upper portion of the lands where the upper branches are and have never seen sufficient water in the upper branches for the irrigation of any land.

256 The time of the year when the snow melts in such quantities as to produce any water in Bitter Creek would be along in February and early in March. Never since I have been connected with the project has there been sufficient snow upon any portion of the drainage basin of this Bitter Creek to produce a flow of water in Bitter Creek for a period of one week. The evaporation in the basin of Bitter Creek from the records kept here at Powell from the middle of April to the last of October is from 24 to 36 inches and 38 inches according to my recollection of the records we keep. The average rain-fall upon this basin of Bitter Creek is just under six inches for the total 12 months of the year, including snow and rain, although it may vary from 3 to 9 inches; assuming that the average rain fall is 9 inches and that the evaporation is only 24 inches, and that the drainage basin consists of 33 square miles, no natural flow of water in Bitter Creek for successful irrigation would be possible, nor for any period of time exceeding a few days.

The deepening of Bitter Creek serves to drain the bordering lands. This deepening lowered the water plans on the farm unit of Mr. H. I. Collins which lies directly East from the farm unit of Mr. Ide. The farm unit of Mr. Richards about a mile and a half down stream was very materially

improved and has been in productive condition since the deepening of the creek. There was a decided improvement in the farm of Mr. Adams which was adjacent to Mr. Ide's and is crossed in the Northerly portion thereof by Bitter Creek. There were farms adjacent to it which were improved by lowering the water plane. When we made the investigations in the vicinity of Bitter Creek test pits within 30 or 40 feet of Bitter Creek would show the water table 3 or 4 feet above the water in the creek. I noticed that particularly in the Easterly portion of Garland Townsite
257 and it happened in other places up the line. The deepening of the creek and opening the bed down to the porous gravel has given the subsurface water an opportunity to flow into the creek. I think the deepening of this ditch resulted in the draining of a portion of the Garland townsite. There used to be alkali there but I haven't noticed it within recent years, and I know that private owners are making their plans to irrigate that portion. In my opinion it could not have been done if Bitter Creek had not drained the sub-water from it. The construction of this canal will result in the draining of and in assisting in the draining of the lands of Mr. Ide through which it passes and will be a benefit to those lands. I am not so certain about the drainage of the seeped lands in the Caldwell school section because the school section is something that the reclamation service does not have any interest in from the drainage point of view. They are not subject to charges. No investigations have been made by the Reclamation Service engineers as to the seeped conditions but I have observed personally that some of the land in the Southwest corner of that school section is covered with alkali. I have noticed along the East central portion that weeds characteristic of water-logged land are beginning to appear, but we have made practically no studies and I don't know what the result will be. It can be said that it will be of some benefit, particularly in protecting the lands adjacent to the creek, but it is an imper-vious soil between the seeped area and the creek. The water will not naturally go through it.

In general it can be said that South of Bitter Creek the land is underlaid with gravel which is covered with a top soil appearing from two to six feet in depth. This gravel extends to below the depth to which our tile drains are excavated, usually from 8 to 9 feet. Above or North of Bitter Creek there is very little underlying gravel. The soil
258 is heavier in character, contains streaks of fine sand and presents problems somewhat different from the

drainage of the area that is underlaid with gravel. It has been my observation that this land absorbs practically all of the water that falls on it as rain or snow except in the case of a heavy cloud burst as we call it, then every natural draw is running with water for a short time.

I have very little occasion to observe the snow that lies in the foot-hills as they are called at the upper portion of this drainage basin during the Spring of the year, as my work practically never calls me up to the bench, and I am not intimately acquainted with it. I simply look out of the window and see the snow up there just as it lies. As to whether there is any portion of this drainage basin where there is more rain than in another portion of it, I can say that the only definite records I am acquainted with are what we keep at Powell, and I know since my connection with the project that cloud bursts, that is, heavy showers, will be first in one portion of the project one year and in another portion another year. They seem to distribute themselves around, but from any authenticated records I am not familiar with the rain-fall except right around Powell. I cannot say from my observation that there is any portion of this area where there is an appreciable difference in the rain-fall.

We constructed this drainage canal and irrigation canal under the authority of the Reclamation Service and we dug the right of way through these lands under authority of the Act of Congress of June 17, 1902, the Act of August 30, 1890, and the Act of the State of Wyoming, granting to the United States right of way over its public lands within a Reclamation Service project.

We had a measuring weir in Bitter Creek where it leaves the project land down about, I should say, 5 miles
259 Southeast of Garland, but this season we installed a self-registering [guage] which showed the daily fluctuations and all changes in the creek in an accurate manner. We have measuring [wiers] which show the amount of waste water and seepage water—what comes down into the canal. The discharge of all the subsurface drains is measured from the weir at the end of the drains just after they discharge into Bitter Creek so that it is possible to determine how much seepage water is flowing in Bitter Creek in addition to what comes in through the banks and the bottom of Bitter Creek itself, which we have opportunities of estimating. We measure the quantity of water which is passed out of the ends of our laterals and main canal, and know within reasonable limits how much of that water is in

Bitter Creek. We measure the total discharge at the end of Bitter Creek near where it leaves the project so that the difference between the discharge of the drains and the water passed from the drain system is composed of three things—a relatively small percentage of it is the return flow into Bitter Creek or subsurface flow; the major portion of it throughout the irrigation system, in fact, practically all of the balance, is surface waste from the farms, and with that there will be combined once in a while the discharge of rain water from storms, so that if there were a rain storm today we could tell from our records when the extra water from the storm began to be discharged at the measuring weir and when it ceased to be discharged and how much and how long it took the storm water to run off.

In regard to the necessity of recovering waste and seepage water, I wish to state that our studies of the water in the Shoshone River show that the ultimate development of this project as now outlined on the map presented here in evidence, combined with the development of Oregon Basin and taking into consideration the prior rights already existing on the river, will consume the entire available run-off of the Shoshone River that can be stored and availed of
260 for irrigation purposes. In fact, the area that can be irrigated in Oregon Basin will be limited, not so much by the land we find as by the water that will be available. Another point is this: Corbett Tunnel which cost something over a million dollars has a definite carrying capacity of about 1,000 cubic feet per second and in order to make the greatest beneficial use of that water it cannot be wasted and permitted to flow off the lands as has been the case in the past year because 100 second feet of water wasted from the farms on this division means there will be several thousand acres of land on the Frannie Division that cannot be furnished with water—several hundred families that cannot be given the means of getting a livelihood. We are fixed in the quantity of water that we can deliver to these lands, but there is practically no limit to the land to which the water can be conveyed for the purpose of making more farms. Now, every second foot of water that we can recover on the Garland division and apply to beneficial use, makes a second foot of water that can be carried on to the Frannie Division and additional lands irrigated. The constructed works of this drainage system have reclaimed and protected 22,000 to 23,000 acres of land on the Garland division. The project works which are located almost entirely off of Bitter Creek will eventually protect and reclaim about

15,000 acres of the Garland division. We have found that as works are constructed and areas reclaimed, seepage will develop in other places not anticipated, and we may have still further works to construct of which at this time we have not an inkling that they will be necessary. Under our present plans, the lands to be irrigated with this drainage, waste and seepage water would be about 3,000 acres, but I expect to see still greater areas on this division irrigated during the height of the irrigation season by these developed waters; that is, during the period from the middle of June to the middle of August when there is a maximum requirement of water and when there is the greatest amount of water in the drains. Of this land proposed thus to

261 be irrigated there are 600 or 700 acres located under Lateral C directly North of town here (Powell) which can be furnished water during part of the irrigation season from what we re-capture from the South branch of Bitter Creek. The balance of the lands which can be furnished water during the peak of the irrigation season are located under what is known as Lateral W. in the Easterly portion of the project. It has been found possible to re-capture and convey this water from the deepened channel of Bitter Creek to the main canal without serious damage to the farms through which it must pass.

In constructing this drainage canal and deepening this creek, it was necessary to put the dirt that was taken out on the banks along the side of the canal. That made what are called spoil banks. In order to prevent harm to the irrigated land nearest to these banks, we left openings in the spoil banks where surface waste could be returned to the deepened channel of Bitter Creek, and constructed wooden chutes so that the water could be dropped into the deepened channel of Bitter Creek without washing or eroding the sides of the banks. We have made provision on practically all farms for stock gaining access to Bitter Creek. We have not, of course, completed all that has been necessary along that line because it has been very difficult to secure men and teams to carry on the necessary work, but that is our plan, and that is what we expect to carry out. We also constructed private bridges across Bitter Creek where we deepened it too much for a satisfactory ford.

There are between 625 and 630 separate farms and separate families on the Shoshone Project. I think these farms are certainly successful.

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Cross Examination.

My work up to 1905 with the Metropolitan Water Board of Massachusetts consisted of surveys, investigations and construction work in connection with the development of storage works, aqueducts and open channels required to convey domestic water from the central portion of Massachusetts to the district within ten miles radius of Boston. On the Buford-Trenton Project, I was in charge of all the surveying work and had several engineering parties working on surveys and investigation leading up to the design of the construction of the canal system which followed in 1906 and 1907. I came to the Shoshone Project first for a few days in 1909. I was here in 1913, but did not stay on the project. My information regarding the topography of the project and the plans of the Reclamation Service in regard thereto prior to the year 1914 was what I read and observed in my studies of the record plans. The recommendations of the Director of the Reclamation Service made in regard to recovering the waste and seepage water of the Shoshone Project were not initiated by me or by my recommendation. I do not know by whom they were initiated. I do not know whether or not these claims made to recover seepage and waste water were ever published in the local paper or ever published in any other places than in the reports. The reports are the only places I have seen them. Perhaps in one or two or three individual instances I have called the attention of settlers to these claims of seepage and waste waters, but not in a general way. I have a very hazy recollection that I did speak to Mr. Caldwell about that once, but I can't tell when, and I wouldn't say that I did, except in conversation generally over in the project office. I would say it must have been about the time the controversy arose between Mr. Caldwell and the Reclamation Service relative to water rights. My recollection of when that conversation arose is that it was in the Summer time of 1916, when I had correspondence and talks with Mr. Caldwell. I recall a letter which Mr. Caldwell wrote to the Water Users Association relative to the Reclamation Service going in with him and taking advantage of his diversion works for the construction of canals which would help us regarding capturing water and getting it into the canal system. That letter was referred to me by the Water Users Association. I have never sent any communication to the owners of the Garland townsite, either the former or the present owners about the claim of the United States Recla-

mation Service to recover waste and seepage waters prior to the commencement of this suit. I do not know of any communication on the subject which they have received.

The United States has special engineers who do nothing else than look over and recommend on the subject of drainage. Mr. D. W. Murphy was one of them. He is not now employed regularly, only from time to time. When any important drainage work comes up the Board considers the matter and the reports have usually been signed by Mr. Murphy, Mr. John R. Iakisch and myself. Mr. Iakisch is in charge of the construction of the drainage work on the Garland Division, Shoshone Project, and he is employed to oversee the construction of the works after the plans are agreed upon. The lands of the Shoshone Project and of the Garland division in particular up to the year 1907 with some exceptions were entirely owned by the United States, and a part of these lands were thrown open to settlement under the reclamation law in the year 1907 to homesteaders on the Garland division and more of these lands have been thrown open each year after the works were completed. These lands were taken up by citizens of the United States and filed upon and homesteaded under the laws of the United States and by complying with the homestead laws in regard to residence and cultivation they are entitled to obtain patent to the land after the end of three years. After taking them up under the reclamation law these settlers pay so much an acre, the charge being finally determined by the Secretary of the Interior based upon the cost of building the irrigation works. That charge is paid by the men that come and homestead the land or their successors. At the end of three years if they have made all payments due they are entitled to receive patents to their land on complying with the homestead laws. At the present time there is somewhere about 100 or more settlers here who have received patents to these lands from the United States. Most of these lands are in such condition that if the present owners would pay all charges due at the present time to the United States, they would be entitled to receive patents from the United States subject, of course, to a lien covering the balance of the payments due. These payments, however, merely cover the pro-rata cost of constructing the irrigation works, the settlers also paying a certain amount each year pro-rata according to the acreage owned, for the operation of the plant, but the payments are also based to some extent on the quantity of water used as well as the acreage. Since the passage of the

Reclamation Extension Act of August 13, 1914, all drainage charges and all costs of draining this land is furthermore assessed against the owners of the land as an additional charge. The charge known as a building charge has been fixed upon the Garland division with the exception of 1,000 acres to be opened North of Garland, and where we have just completed the canal system. The United States has paid everything so far for the cost of drainage works and the people have paid practically nothing because they have obligated themselves to pay it during a period of 20 years without interest charges. It was on the strength of that obligation that the United States went ahead and the United States has the land to secure that obligation—all the lands of the entrymen or their successors or the owners within the Project. Eventually all payments will come out of the owners of the land.

265 I was never on Bitter Creek prior to 1909, and know nothing about the condition of Bitter Creek then and prior to that time. When I was here in 1909 I visited and saw the lower end of Bitter Creek just about a mile or so above the Shoshone River, and I didn't see any portion of it again until July, 1913. While Project Manager in 1914, I did not permit the entrymen or owners of land to discharge their surface waste water into Government laterals or canals. There are two kinds of waste water from irrigation: that is, the underground water known as seepage water and the surface waste water. I do not recall any surface waste ditches that were constructed since my connection with the project. I know some were constructed prior to that. The reason we did not do it was that the approved regulations of the Secretary of the Interior provided that the unit holders should construct necessary waste ditches. I have heard of some pretty strenuous times that they used to have trying to suppress and prevent waste water resulting from irrigation on the Project. We took no action in the matter of the policy of constructing waste ditches for the farmers but we have rather stringent regulations to prevent surface waste at its source, by shutting off such a quantity of water as the farmer was permitting to flow off his land. It was the policy of the Reclamation Service to prohibit the diversion of surface waste water into Government laterals and Government canals. We now allow that under certain restrictions which we are trying to carry out and enforce, and we are having rather indifferent success and a good many troubles. I have never farmed on a very extensive scale. I raised once in North Dakota an acre of potatoes by irrigation.

When I came to this Project as Manager, Bitter Creek had been deepened in two places. One place was at the end of Drain K on the farm unit which was filed upon by Mr. 266 A. W. Ide, and as I recall there was also some deepening done at the end of Drain J, which is about two or three thousand feet South and below Drain K. The length of the deepening at the outlet of Drain K was 12 or 15 feet. I have no clear recollection as to Drain J, but in my judgment the deepening there was not so long. The dirt excavated at Drain K was deposited practically all on the South or right bank of Bitter Creek. It was deposited on the land that was afterwards homesteaded by Mr. Ide. Prior to the institution of suit by the United States against Ide and Caldwell—that is, prior to 1918, there had been 12 drains constructed which emptied into Bitter Creek. There were one or two very short drains way down below Garland which we built partially in 1917 and finished this Spring of 1919. These drains are located between points $3\frac{1}{2}$ miles Northwesterly from Garland and about $3\frac{1}{2}$ or 4 miles Southeasterly from Garland. Up to the year 1918 the channel of Bitter Creek had been deepened for a distance of a little over two miles in all. The deepening commenced at the Easterly edge of Garland townsite and continued up stream to just below the diversion works of the Lincoln Land Company. With the deepening Bitter Creek successfully carried off the waters from the drains that flowed into the deepened part. This year, 1919, we deepened an additional part of Bitter Creek beginning at the point we left off in 1915, and have continued to follow up stream until we have carried out works nearly three miles above the point where we begin which is nearly to the crossing of Bitter Creek with the main road leading North from Powell townsite, which is about a mile West of the Southwest corner of Caldwell's land in the school section. There is one drain West of the school section and one that discharges into Bitter Creek in the school section. The drain discharging in the school section designated Drain N was, I think, constructed in 1915. The other drain designated Drain V was constructed this 267 year. As to when the plans were made for the deepening of Bitter Creek that was done in the year 1919 I can answer by stating that the maps in the office showed the surveys for this year made in 1912. The profile for the deepening of Bitter Creek was prepared I am very certain, prior to my taking charge of the Project, but the ultimate development as to how far we were going to go was not definitely determined and, in fact, is not definitely determined

now. The plans for the deepening of Bitter Creek on Caldwell's place and on Ide's place I am very certain were perfected prior to my coming to the Project and it was determined in February, 1918, to go ahead with the work. Written notice was given Mr. Ide some time in June prior to our going on to his unit. As to the notice given Mr. Caldwell prior to the going on his land—I am pretty certain that I sent copies of the State law granting us a right of way. I don't recall the date, but I am certain that was done just prior to entering upon his land—the school land. That would be some time this Summer. I knew of course that the work we intended to do and that we have completed would deprive the Garland townsite of water from Bitter Creek for irrigation purposes. We sent no written notices to the owners of the Garland townsite so far as I know. We went out there and dug a temporary ditch around their diversion works so as to let them know the Reclamation Service proposed to assert what it believed were its rights. That ditch was promptly filled in by somebody and a notice of the State Water Commissioner posted on the back fill warning everybody to keep off. When we constructed that ditch we put a bridge across the same and then went ahead and completed the deepening of Bitter Creek with the result that the owners of the Garland townsite could not obtain irrigation water from Bitter Creek.

It is true of any large irrigation system like the Shoshone Project that in irrigating and in the operation of the
268 irrigation system the result is that the lands in places become seepy and bogged unless drainage is provided. I cannot say what was the opinion of the Reclamation Service about the necessity for drainage at the time of the construction of the Shoshone Project. I have never heard any opinion from the engineers in charge of the work at that time. I have seen a published statement that was sent out from the settlement office in Chicago relative to drainage works on the Shoshone Project. The general tenor of it was, as I recall, that provision was made for drainage. It is my recollection of the specification prepared that drainage was first begun upon a contract that was made in 1911. The idea of deepening Bitter Creek is not only to receive the water from the drains and provide better drainage but to save the water and use it for further irrigation of lands lying East of Powell. The owners of the school section can whenever they want make application and obtain water from the United States. The owners of the Garland townsite cannot because the Government does not issue water rights for townsite

lands except under rather exceptional conditions. We didn't issue a water right to Powell townsite lands. We sell water on a rental basis. The owners of the school land could obtain water for irrigation purposes from the United States by making the payments. The Reclamation Service of course could not use elsewhere any water which the owners of the school lands obtained from the United States and used in irrigation. The amount of water used on the Garland townsite and on the school section for irrigation is comparatively a drop in the bucket considered in connection with the other lands to be irrigated. These lands we intend to irrigate during the peak and maximum requirements with the waste water that is flowing into Bitter Creek are located under what we term Lateral W, which irrigates land on the South side of Bitter Creek Southeast of Garland. This refers to the canal that heads on the farm unit of Mr. Ide. The area irrigated under Lateral W is somewhere about 2100, to 2300, 269 acres. I do not recall the number of farm units. The lateral has an initial capacity of about 60 cubic feet per second. We have enough water coming down Bitter Creek to supply this 60 cubic feet per second during the period of maximum irrigation. In fact, it is oftentimes more than twice that. Most of this water is surface waste from the farms. There is some drainage water also.

The tests for water fall and for evaporation made at Powell conformed with the best methods prescribed by the Weather Bureau. We maintain two evaporation pans about 4 to 5 feet in diameter and possibly 10 inches deep. One is located on a wooden tower about 10 feet above the ground just East of the Project office. The second pan is located in the alfalfa field almost Southeast of the office. We also have an evaporation pan at Shoshone Dam and for a little while kept one at Ralston Reservoir. We measure the water that is put into those pans and then, as it recedes and evaporates, we record the rate at which it falls. When it is nearly empty, we fill it up again. We of course make due allowance for any rain fall. The pans are of galvanized iron. The evaporation at Powell ranges from 24 to 36 inches during the irrigation season. The evaporation is greater in the pan on the tower than in the pan in the alfalfa field. We have made no tests of evaporation from the soil itself. I cannot tell from my observation how much of the water used for irrigation goes into the soil and how much in evaporation. We keep a rain gauge. Our tests for rain fall were made at Powell. We keep a rain gauge just East of the Project office building.

I stated that the drainage water in Bitter Creek was surface water that came from irrigation, but it would be a fact that if we had a cloud burst that was sufficiently heavy to contribute water to Bitter Creek, then there would be rain fall also in Bitter Creek. We have never kept any tests
270 of evaporation on the North branch of Bitter Creek nor on the South branch. The lands irrigated on the Garland division extend 4 or 5 miles North and 4 or 5 miles South of Powell. Garland lies a little North and East of Powell. There is very little land irrigated North of Ralston. The land around Ralston drains into Alkali Creek. About two miles Easterly from Ralston the land begins to drain into Bitter Creek and from there Northerly swinging around the bluffs until we get pretty well out Northwest of Garland all that area drains into Bitter Creek. The Reclamation employee in charge of the irrigation ditches have to pay attention to rains in that territory because some of these rains have a tendency to get into some of our canals before they reach the branches of Bitter Creek. These canals are Lateral A, the Frannie Canal and Lateral B; and down North of Garland we will get water in Lateral D. This happens on an average of perhaps twice a year. Lateral B starts out of the main canal about one mile West of Powell, continues thence in a Northerly direction for about two miles and commences to swing around on the [ark] of a circle until it gets North and East of Powell. Lateral A heads from the main Canal in the Ralston townsite and is the highest canal on the Garland division, and swings along the Powell Flat, and on an average of two or three miles from the bluffs which rise up to the bench. In between there is the Frannie Canal which is parallel and about half way between these two canals. The South branch of Bitter Creek doesn't interfere with Lateral A as far as I can recall. There are drainage culverts constructed under all of these canals wherever we cross a natural draw of any size—these cross drainage structures have been provided for the passing of surface water.

The Reclamation Service had a measuring weir in the channel in Bitter Creek about four miles below Garland. After the water went over the measuring weir it continued
271 down the old channel of Bitter Creek across the Sidon Canal and then went into the Shoshone River. In the latter part of July, 1919 we put in an automatic selfrecording device to measure this water. I think, including this season, we have measured the water in Bitter Creek for about six seasons—ever since I have been here.

It might appear at first thought that the siphon in Bitter Creek on Ide's land might bring water levels on Ide's land up to where it was before the channel of Bitter Creek was deepened, but, while the siphon would retard the flow, it wouldn't back the water up a great distance. We have observed this in Drain A, which now carries several times as much water as it was expected it would carry. The culverts at the road crossings are inadequate in size and the water will back up to 4 or 5 feet above the normal water level in the open drain. Now, from our observation, we can't see that that is doing any harm as it is so local in character. The water has a chance to work through the soil and it very soon drifts down. We have observed no damage in lands adjoining this high water in Drain A. We have kept rather close watch of it, but we intend to enlarge these culverts as soon as we get the proper machines so as to relieve that situation. I have noticed certain land that has become seeped on Ide's place. There was a tile drain constructed on Ide's land before this seepage developed. The object of the tile drain was to relieve the seeped and threatened lands of the Garland Division. That drain did not satisfactorily drain all of the lands for which it was constructed. We placed a cross-connection to that drain so that the lower end of it would not have to carry so much water. I do not see how that could have relieved the seepage on Ide's land. I had the seeped land on Ide's place investigated and I could not tell you the amount without referring to the records. I do not know whether it is less or more today than it was formerly. The examination was surface observations as far as I know and made by the Superintendent of Irrigation, Mr. C. M. Jump. I do not know the amount of water that is being drained from Ide's land into Bitter Creek. It can't be exactly measured. It is reasonable to expect that some flow is coming from his ground into Bitter Creek. In my direct examination I did not intend to make a definite statement that the farms along Bitter Creek where the channel had been deepened were benefited to the extent of some 30 or 40 feet on each side of the deepened channel by drainage into Bitter Creek; because in my judgment there are places where it would extend back even further than that. We know that certain farms were seeped before we deepened the creek. We know now that they are in a productive condition. We know the depth of water in some of the wells adjacent to Bitter Creek. We know that the deepening of Bitter Creek had no influence in lowering the water in the wells, but it is pretty difficult to say just what is going on under ground.

Re-Direct Examination.

Before we deepened Bitter Creek there would be times when there was so much flow in Bitter Creek that the lower end of Drain K which crosses Mr. Ide's unit would be submerged and that slightly reduced the efficiency of the drain. There would be times when the high water along the end of Drain J would also have its influence on the discharge of that drain, but that was not as serious as Drain K. Before we deepened Bitter Creek it was necessary in two of our drains to resort to an open drain at the lower end, because we could not continue the tile on its projected grade because that would bring us under the bed of Bitter Creek, so we had to stop the laying of tile and let the water flow through an open drain and discharge into Bitter Creek until we deepened the creek and then we laid the tile and covered it over. The Government's plan, beginning before I took charge of the Project, including the surveys for the deepening of Bitter Creek through the Ide and Caldwell land was one of continuing development. The fact that the Government

273 Reclamation Service refused to provide waste ditches for each individual unit had nothing to do with the determination of the Government to preserve the waste and drainage water for future use. It was purely a matter of policy in the management and operation of the irrigated lands and had nothing whatever to do with the policy of re-capturing the waste water and putting it to beneficial use. The fact that we have now tried to try out a plan whereby waste water may be diverted to some of the canals is also purely a matter of project management; that is, of farm management, and has nothing to do with the re-capture of waste water, and that is done for the purpose of meeting conditions as they arise in the development of the project.

Re-Cross Examination.

The policy to use the waste water from the Garland Division for lands lying East of Garland was first given rather definite consideration when the Director, Mr. A. P. Davis, was here in August, 1915. A shortage of water was confronting us and the question naturally came up, why could we not get some of this Bitter Creek water where we could make use of it, and we began studies of the problem trying to see what could be done with the least damage to farming lands and they eventually arrived at this plan of taking a canal out of Mr. Ide's unit and running it into Bitter Creek. So the work was first considered in 1915 and carried on

through 1916, and our plans were more fully developed and approved in the latter part of 1917. In June and July of last year we constructed a small canal about a mile and a half North of Powell which was part of the same general policy. That canal crosses the Northerly end of the Loving unit and A. G. Wright unit. We began using the water through that ditch in July during the period of maximum demand. That headgate was a mile or more above Caldwell's headgate. We used that water continuously after the ditch was constructed during the period of maximum demand and after the demand let up we didn't use that
274 water so much. It has been used the same way this year. Bitter Creek in carrying the waters down by Ide's place before it was deepened would at times submerge the lower end of Drain K. The fact that we had a measuring device at the lower end of the tile also checked the water. The special measuring device we had to put in there we call a submerged orifice for we didn't have sufficient fall to put in an overflow weir. The difference in elevation with the submerged orifice did not exceed a couple of inches in a flow of three or four second feet. I never saw the waters in Bitter Creek come up to the top of that orifice, but I wasn't there in periods when it was in flood, and I don't know whether it ever did or not.

J. R. IAKISCH, called by plaintiff testified by deposition:

My name is J. R. Iakisch. I am a Civil Engineer 40 years old. I graduated in 1911 from the five years engineering course of the University of Wisconsin and received the degree of C. E. During the Summer of 1910 I worked for the Chenengo Furnace Company in Northern Minnesota; I had charge of the engineering work in the ground mine and surface construction and electrification of the mine. Since 1911 I have been employed by the Reclamation Service on the Shoshone Project. I am a member of the American Society of Engineers.

I came to the Shoshone Project March 6, 1911. Mr. Sanford and Mr. Murphy and myself, generally speaking, constituted a Board on the Drainage System of the project. The drainage district ditches were constructed in my opinion according to the best modern engineering knowledge. It was necessary to have a central drainage canal and the topography of the lands required that that central canal would be along what is called Bitter Creek. Having that in view,

it was determined way back in the early days to
275 deepen Bitter Creek in order to use it as such a
canal. I am not certain whether that plan was ar-
ranged before I came here or not. I know that it was talked
of in 1911 and arranged for in the Winter of 1912, I believe,
and I made a topographic survey of Bitter Creek which was
for the purpose of determining what Bitter Creek was like in
order to deepen it and make it useful as an outlet for our
drainage. I had charge of one party making that survey,
and Mr. Glover had charge of another. We determined with
stadia and plane tables just where the contours in the creek
and for some distance on either side of the creek were. The
maps made in the field show elevations of the creek and
sometimes the natural slopes and banks of the creek. This
work was started in May, 1912, and finished that month or
the next. This work was necessary to determine what would
have to be done in the matter of deepening Bitter Creek to
make it fit for the purpose for which it was intended. We
not only took topographic surveys of the country, but made
soundings in the bottom of the creek. From these investi-
gations it was found necessary to deepen Bitter Creek to
make it a fit drainage channel. Deepening varies in dif-
ferent parts I would say from two to four and five feet. This
depends upon the depths that the bed of the creek had al-
ready attained in places. This deepening was necessary in
order to take care of the drainage water resulting from the
construction of drains. The work of deepening the channel
of Bitter Creek began in the Fall of 1914 and has continued
as rapidly as the nature of the work and the development of
the project would permit up until the present time. About
three miles was first completed beginning at the Eastern
part of Garland townsite to a point on the creek just below
the diversion works of the Lincoln Land Company. It was
begun in the Fall of 1914, and completed in the late Fall of
1915.

This deepening of Bitter Creek resulted in the draining
of lands adjacent to it. Practically all the lands ad-
276 jacent to that part of Bitter Creek which was deep-
ened at that time were more or less water-logged, in
some cases extending to as much as 2,000 feet on either side
of the creek. One of the places was Adams' place; I think
that has since changed hands. Also Jones' place, now
known as the Kropp place, and also the Plummer place. The
Adams' place was entirely water-logged. No crops were
growing on it at all nor could be grown. The deepening of

the channel of Bitter Creek drains the Adams lands so that they are now productive. They were worthless before, but as to their present value I do not know whether I am competent to say. The Jones' place was not in as bad a condition as the Adams' place, but there was considerable water-logged land on this, and the deepening of Bitter Creek unwatered this land for a distance of about six or eight hundred feet from the drain, and this land afterwards became productive. Lying to the Northwest of the Adams place and on the other side of the road was Mr. Lynn's unit. His farm was water-logged to some extent on his North side and to a considerable extent on his South side. The deepening of Bitter Creek dried up his well and drained his land for a distance of four or five hundred feet from his South line and lowered the water level on the remaining portion of his land. I would say that the water plane was lowered from four feet on the North side to about five or six feet on the South side. On Mr. Kropp's land the water was dangerously close and alkali was showing in some places on the surface. The drainage lowered the ground water on his farm to a point where he has had no further trouble with water. On the Plummer place there was land extending from 100 to 400 feet from Bitter Creek that was water-logged and alkali-
277 ed, and since the deepening of Bitter Creek this has become unwatered and productive and he is growing crops there as good as any other place on the farm. The Richards place lies just West of the Adams place. Bitter Creek runs through it. I don't remember it as well as I do some of the other places, but I would say that to a distance of from two to four hundred feet on either side of the creek it was in a water-logged condition. I know Richards' farm is now all of it in a productive state. The deepening of Bitter Creek in 1914 and '15 resulted in the drainage of the farms adjacent thereto and a lowering of the water plane on these farms. Without this drainage these water-logged lands would have been absolutely valueless.

The work of continuing to deepen Bitter Creek was taken up in the spring of 1918. We deepened it from where we left off in 1915 to a point about straight North of the town of Powell. We are still deepening the channel. We deepened Bitter Creek through Mr. Ide's unit. The creek was already there so that its deepening did not result in the dividing up of Ide's farm into any more parcels than it was already divided into. It was already cut up. On Ide's place there was also built a canal alongside of Bitter Creek as near

as we could get it and still have room for our spoil banks so that the digging of this canal did not cut up his place into any more parcels than it was already cut into.

In order to prevent the spoils banks from acting as a collector of water in the irrigation season, it has been our policy, and we have always done it along the entire reach of Bitter Creek which we have drained, to cut or leave places through the spoil banks that were thrown up from the construction of Bitter Creek for the passage of surface water into Bitter Creek. In these places we always put chutes to conduct that water into Bitter Creek in order that it would not erode the banks. That was done on the work that we put in in 1914 and 1915. The work we have put in this year leaves openings in the spoil banks at all low points and usually at the farm lines. All of the chutes have not been constructed because we have not been able to get labor enough this year to keep pace with the dragline. It will

require very little work to take any of the surface waters that run up against that bank and conduct them to such openings and get rid of them. On the work we constructed during 1914 and 1915 I do not believe there are ten square rods of land that have become waterlogged or soured by surface water standing up against the spoil banks of the creek. It may be necessary in some places to construct a small surface ditch to lead the water off to the openings that we have left in the banks of the creek, but this will require only a shallow surface drain not more than a foot deep at the very most. We have had no trouble with the caving in of banks on that portion of Bitter Creek that was deepened in 1914 and 1915, and we have had no particular trouble with the caving of banks on that portion that was constructed this year. There is no reason why the banks should cave in at all. We deepened the channel of Bitter Creek through a school section of Mr. Caldwell. All that was done upon Caldwell's school section was lowering the natural bed of the stream, sloping the banks and rectifying the channel. But this did not cut up Mr. Caldwell's farm into any more parcels than it was cut up into before because this deep gulch already had cut the farm into parcels.

It is my opinion as an engineer that the deepening of the channel of Bitter Creek where it has been deepened this year is certainly going to do some good. Whether it will drain as far as it did before through the gravel surface lower down is a question I can't decide at this time. It will have to show up next year. It was necessary to deepen Bitter Creek

to have outlets for the drains that were constructed and are to be constructed on this project. The creek was not deep enough for the drains that had already been constructed. During a large part of the Summer the outlets for these drains were submerged and retarded the drainage. Most of our drains were put in with the idea that we would eventually have to deepen Bitter Creek in order to give them a proper outlet. In two cases we deepened the creek

279 before we put in the drains. That was done in 1912.

Since 1912 we have had more water running in the creek due to increase of surface waste and, as our slope above the tile drain was rather steep, this additional water partially filled up the portion that we had deepened and the tile became submerged during the high water in the Summer. Bitter Creek above the siphon on Mr. Ide's place was deepened a foot to a foot and a half. I was in charge of the work at that time. The testimony that it was deepened above the siphon is not true.

I was in charge of the construction of a portion of the Frannie Canal located about 3 or 4 miles from the foothills of the bench. The foothills are from 5 to 6 miles away from the furthest limit of the drainage basin of Bitter Creek. I was also engaged in surveying and constructing lateral A about a mile above the Frannie and that is still nearer the extreme outside limit of the drainage basin and the bench. The survey of Lateral A extension necessitated the investigation of the drainage areas above Lateral A, in order to make an estimate of the size of the drain water culverts to put underneath Lateral A extension. I first went up there to engage in this work during the first part of the month of March, 1911. I was up there constantly from the first of March until through the Summer of 1911. I had opportunity to examine and see whatever snow there was there upon the bench or foothills during that entire Spring and Summer and there was practically no snow. There was not sufficient snow melted in that year to produce a flow of water that would reach to any portion of Bitter Creek. I think that the records will show for a period of years that there was as much snow up there that year 1911 as there has been any year and as much rainfall as well. It was not necessary to make any provision for the taking care of any waters that might come down from melting snows.

There were some storm water culverts put under Lateral A extension and there are some under the Frannie
280 Canal, but these are not for melting snow While I

was up there during the entire Summer of 1911, I do not recall having seen it raining here when it was raining up there or raining up there when it was raining here. It has been my impresssion that these rain storms were fairly well scattered over the Garland Flat. Powell is practically in the center of the drainage area. Above Caldwell's division, I think the drainage area is 33 square miles. Above the diversion of the Lincoln Land Company it is about 40 square miles which is the greatest possible extent of the drainage area. Generally speaking the country slopes from the edge of the bench to the North and the West and there is very little of the top of the bench that is included in the water shed of Bitter Creek. I would estimate about 6 or 7 square miles of the top of the bench and the steep slope on the side of the bench altogether are included in the drainage area of Bitter Creek.

I had occasion to make some land classification under the Frannie Canal during the Winter and Spring of 1912 and 1913, and that brought me again into contact with the bench and its snows. I think there was no more snow in that Winter than there was in the Winter before. No melting snow in the Spring reached to what is called Bitter Creek. During the next Winter and Spring I took occasional trips out on the area beyond the Frannie Canal now known as the lands under Lateral A extension. These trips were probably oftener than once a week during February, March and April. I do not recall that there was any more snow there than there had been during the two previous years. Each year was just about the same and there was no snow when melted which produced a sufficient flow to reach Bitter Creek. When we have a snow fall there if Bitter Creek drifts full and we then have a warm wind we might find some run-off in Bitter Creek. The run-off would stop as soon as it got cold.

There would have to be more snow than we have ever
281 had here to produce water in Bitter Creek. I think it takes in the neighborhood of one foot of snow to produce one inch of water but I am not certain.

I made a topographic survey of Bitter Creek and thereby became familiar with all portions of the drainage basin of the creek and of the depressions which might be called a portion of it. The only tree that I have ever seen on Bitter Creek was one cotton wood down below Garland. There were no willows growing on the banks nor any other vegetation or grasses characteristic of running water above the point where the surface water from irrigation comes into the

stream. Prior to the time that irrigation water was turned into the stream I knew of no vegetation along it that was characteristic of a running stream. The banks of Bitter Creek are rather vertical. Such banks are usually caused by a stream of intermittent flow. If a stream has water flowing in it continuously, it will form a flood plane and its banks will become rather sloping and will become covered with vegetation of one kind or another which in this country is usually cottonwoods, willows, alders and grasses. The vertical banks would generally be formed by a cloud burst or floods that suddenly arise and come down into the valley and run off after storms or floods. The drainage area of Bitter Creek is such that it is not possible for it to have any natural flow of water. It is true, however, that a cloud burst upon the Flats or a heavy rain there in the Summer time would cause water to go into Bitter Creek and run down it. If we have a rain late in the afternoon or early in the evening, I find that the creek has dropped considerably the next morning when I get out the drag line. If we have a heavy fall over this area I usually make it a point to get out there early in the morning to see what damage it has accomplished. The sides of the ditch and the water going down next morning seem to indicate a rapid run-off. I have had no
282 occasion to examine the records relative to how much rainfall it takes to make an inch of run-off.

Cross-Examination.

The topographical survey I made extended from the point where the South branch of Bitter Creek crosses the line South of the farm unit of N. E. Bozeman in Lot 82 to where it crosses the road South of the farm unit of J. W. Lord in Lot 55; that is, I began approximately at a point a mile North and a mile West of the center of the Powell townsite and extended the surveys in an Easterly direction down towards Garland and past Garland. We made no topographic surveys West of the point where we began.

The nature of the soil is one of the factors that enters into the construction of all our drainage ditches. We found gravel in the bed of Bitter Creek at the point a little above the siphon on Mr. Ide's unit. Beginning at the upper end of our survey we found gravel from there to a point about where Lateral C crosses the creek. Between Lateral C and Mr. Ide's place we found no gravel. Between these two points the soil would vary from sand and sandy clay to heavy soil. The nature of the soil is determined largely by

soundings with a rod, which is a very good method of telling whether you have gravel underneath or not. The soundings told us only whether there was gravel. We first deepened Bitter Creek on the lower Easterly end.

There were tile drains constructed into Bitter Creek on the lower part before we deepened Bitter Creek except that in two places Bitter Creek was deepened a short distance below the drains that were put in. This was in 1912. We later put in drains and deepened Bitter Creek East and West of Garland. For the purpose of draining the lands immediately adjacent to Bitter Creek when it was deepened I believe it was not necessary to construct the lower portion of the tile drains that run into it. The Bed of Bitter Creek was about 4 feet below the level of the adjacent country and we deepened it 4 or 5 feet making the ditch about 8 to 9 feet in depth. All of Mr. Adams' land was water-logged
283 before Bitter Creek was deepened at that point. I

have no recollection of Mr. Adams' land previous to its becoming water-logged. It is in a productive condition now, I believe. We deepened Bitter Creek in 1918 where it crosses the Collins land and from there up to the siphon on the Ide farm. We deepened Bitter Creek directly above the siphon on the Ide farm and right next to it for about a foot to a foot and a half deep. I believe I made a former statement that Bitter Creek was deepened a distance of from two to five feet below its natural bed. We deepened it on Ide's land above the siphon about a foot to a foot and a half. When I said we deepened Bitter Creek from two to five feet, I was speaking generally considering the creek as a whole, but at the siphon and above the siphon I would have to revise that statement.

We have constructed a canal on Mr. Collins' land and on Mr. Ide's land paralleling Bitter Creek. It is deep enough so that, by constructing a check in Bitter Creek, which we intend to do before next irrigation season, to divert water from Bitter Creek into the canal, that canal is at least on the grade of Bitter Creek. The diversion point of that canal is on Mr. Ide's land a few feet below where drain K empties into Bitter Creek about 100 to 200 feet. At that point we intend to place a check. The tendency of that check will be to raise the water and divert it from Bitter Creek into the canal so that it may be necessary at times to raise the flow of water in Bitter Creek slightly in order to get it into the canal. At the present time (November, 1918) there is no

water flowing in that canal. To my knowledge there has been no water diverted from Bitter Creek into that canal during this year.

I have noticed water-logged lands on Mr. Ide's place on the South side of Bitter Creek and of the canal and to the East of the lateral. The canal does not extend entirely across Mr. Ide's unit and it is possible for the under-
284 ground water to get into Bitter Creek, and not have to cross the canal. There is a stretch of about four or five hundred feet between the lateral and the diversion works into the canal, so there would be nothing to prevent the water at that point from coming into the creek. If any of the land was water-logged on the banks of the canal, I expect the water would drain into the canal, although it is possible that some of that water would get into Bitter Creek underneath the canal.

In deepening Bitter Creek and also in constructing this canal, we deposited the earth from the excavations on both sides of Bitter Creek, and on both sides of the canal on Mr. Ide's land. There is one opening in this bank thrown up from the excavation on the East line of Mr. Ide's unit. There is an opening on the North side of this spoil bank, according to my recollection, about four hundred feet from the East line. Also, water has an opportunity to get into the creek where there is no spoil bank for a short distance near the siphon. When I say the East line, I do not mean the East part of Bitter Creek, but the East line of Mr. Ide's unit. We deepened Bitter Creek on the East line of Mr. Ide's unit between him and Collins. Our topographic surveys in 1912 included Mr. Ide's land, but I did not consult the map of the surveys of 1912 in determining where the openings through the spoil banks should be. Generally speaking, we left an opening on the lower part of a man's farm as we did in this case on the East line. The one through the North spoil bank that I mentioned I think is put there where Mr. Ide wanted it, which agreed with my observations and views. We put in these openings for Mr. Ide to allow the water to escape. When we put in the check to divert the water from Bitter Creek into the canal, I think it raised the water level of Bitter Creek about a foot, but it will not raise the water level to the top of
Drain K.

285 I expect we intended to take the full capacity of our canal out of Bitter Creek at that point. Its capacity, I think, is about 50 second feet. The check that we will

construct there will be of such a nature that stop planks can be dropped in and the water prevented from going on through. We will continue to put in stop planks until we get our 50 second feet of water into the canal. I cannot say how many stop planks will be necessary to accomplish this. It may not be necessary to put in any. I think, though, it will be possible to use one or two in the bottom of the structure. I assume the stop planks will be about 8 inches wide, so that it might be necessary to put a dam in the creek by these stop planks of 8 to 16 inches in height. This will have a tendency to raise the water level of Bitter Creek for a certain distance above the check. The idea of putting the check in is to raise the water so that it will flow into the canal.

After we went through Mr. Ide's land we later deepened Bitter Creek in the school section owned by Caldwell. In deepening Bitter Creek on Caldwell's land we deposited dirt on both sides of the bank of Bitter Creek. At certain parts of Caldwell's land we cut off certain corners of Bitter Creek rectifying the channel wherever we thought it was necessary. We did not follow the course of Bitter Creek at places. It is not my experience from my observation of canals and ditches here that banks of a canal when freshly made will wash much more than old banks that have been in existence for 5 or 6 years or more.

I have never noticed any trees on Mr. Caldwell's homestead land along Bitter Creek. The first time I was there that I have any definite recollection was when we made that survey through Caldwell's land in 1912 and my work
286 as engineer in charge of drainage and in charge of investigations has taken me down there at intervals of time. I don't know how frequently. I cannot definitely say I have ever noticed any willows on Mr. Caldwell's place.

My first visit to this Project was in 1911. The Project was partially constructed then and part of the lands were being farmed. I was never here before these lands were farmed. My work on the [Farnnie] Canal in 1912 and 1913—in February and March—consisted of a survey of the lands for the purposes of classification in regard to irrigability and a preliminary location of Lateral A extension and its distributaries, and the work in connection with such locations. In 1912 most of my work was above the Frannie Canal. We started the survey of Lateral A extension shortly after the holidays, and we worked on that until called off

to make a survey of Bitter Creek. That place was three or four miles from the top of the bench. Some of my work took me to the top of the bench. I would say our work began about a mile from the extreme Southwest corner of the bench there. The Frannie Canal was being constructed when I came here in the Spring of 1911. Considerable work had been done and it was finished that Spring. Laterals B and C were finished before I came here. All rain water and waters from melting snow North of Laterals C and B and North of Frannie Canal would have to go under these canals in culverts. I do not remember the number of culverts constructed. The tendency of these canals is to obstruct the surface flow of waters.

Bitter Creek drains a considerable area of ground North and West of Caldwell's school section. My work kept me over that area Northwest of Caldwell's school section over on Lateral F or the Frannie Canal from where it takes out of the Garland Canal to its end as it was constructed at that time. I have no particular recollection of the
287 snow we had in this country this last May. I have no recollection of Bitter Creek being flooded with water from the melting snow early this May nor of the canals of the Government Project being flooded from melting snow this May. In the Spring of 1911 and the Spring of 1912 I was on the drainage shed of both branches of Bitter Creek. I have never known exactly what the main branch of Bitter Creek is up in that country. There seems to be no well-defined creek up there that anyone has ever called the main branch of Bitter Creek, when you get up into that country. I assume that all of the drainage of that country gets into larger channels and eventually forms what is called the North Fork or South Fork of Bitter Creek, but just where the exact point is where they form the main branch, I do not know. I saw no water flowing in that country in the Springs of 1911 and 1912. My work extended over that entire country and of course I had opportunity of seeing the condition of these washes during the Spring of the year—practically all of them. I mean in the Springs of 1911 and 1912 after my arrival on the Project. Our work took us over that country to a considerable extent. We had to do considerable driving from one point to another where the different crews were working on the construction and where our survey work took us, and we had to cross these washes. In my direct examination I said there were only 6 square miles in area from the top

of the bench down to the foot-hills that was drained into Bitter Creek or its tributaries. I ran a stadia traverse from Lateral A to the upper end of the Bitter Creek watershed, practically to the top of the bench. The distance averages over three-fourths of a mile. I never had occasion to take the levels of the bench from the top in a Northerly direction. From my observation, but not from any surveys, I know that practically all of the drainage on the top of the bench goes to the North and to the West.

Re-Direct Examination.

The land adjacent to Bitter Creek on Mr. Ide's unit might have been drained by the deepening of Bitter Creek but it was necessary to construct the lower end of the drain through Mr. Ide's unit and also through these other units on down to the creek and up the creek in order to get outlet for the lands which were bogged up above the end which the drains were intended to drain. The canals on Ide's place would act as a drain just the same as the creek. When the banks of a creek or a canal are properly sloped they will not wash as much as if they were perpendicular or not properly sloped. Where the stream has many crooks and turns the water is much more likely to erode the banks. We straightened out the channel with the idea of preventing the erosion of the banks. There was no well-defined channel for the upper branches of Bitter Creek and I could not discover what would be the channel of the upper and lower branches. There are coulees and gulches through which water runs in the freshets and storms which must ultimately drain down through the dry wash known as Bitter Creek.

Re-Cross Examination.

I do not recall offhand the depth of the canal on Mr. Ide's land. I think it is six feet wide on the bottom with one and a half to one slope, although I am not sure. The depth of the canal and the depth of the water when 50 second feet is running through the canal is a matter of record and of computation which I could obtain if necessary. The bottom width of the canal at the diversion is 7 feet at grade. The depth of the water is 2.2 feet. The outlet of Drain K, I would say, is about 3 feet above the level of the bottom of Bitter Creek. Before we deepened Bitter Creek the bed of Bitter Creek was just about the elevation

of the outlet of Drain K, but the water which flowed into Bitter Creek stood quite a bit above the grade of the drain at the outlet. We deepened Bitter Creek at the outlet of Drain K, about 3 feet. The idea of this canal is nothing more than to take water for irrigation purposes near the outlet of Drain K, and conduct the same into the Garland Canal.

HARRY I. COLLINS, called by plaintiff, testified by deposition:

My name is Harry I. Collins. I live about three miles and a half Northeast of Powell, Wyoming. I have lived there 7 years last March. I owned a farm unit there until about a month ago. I was located adjoining A. W. Ide's farm unit. Bitter Creek runs through A. W. Ide's unit and across the corner of my unit—just a very small portion of the corner. This Bitter Creek was deepened below my farm unit in 1914 and 1915. Prior to that time Bitter Creek was deepened through my farm. My land was not water-logged or seeped except it was seeped up in the corner nearest to Paul Smith's place. The water was close to the top of the ground. Bitter Creek was deepened below my farm in 1914 and 1915, but not on my farm. The effect of deepening Bitter Creek upon the threatened water-logged condition of my land was that it drained it. At the creek bridge South of my place the water was within two feet of the top of the ground, and it seeped up in some places. The ground was a little bit damp at the top. At the time they got to Bitter Creek bridge in deepening Bitter Creek channel South of my place the water went down six feet. I have a well on my place about 300 yards from Bitter Creek. The deepening of Bitter Creek lowered the well, I judge, 10 or 15 feet. The deepening of Bitter Creek this year resulted in the lowering of the water level, showing the effect in one night's time. The level went down immediately on the deepening of Bitter Creek. This deepening, I think, lowered the water level on the lands between me and Bitter Creek in order to lower the water levels on my land.

Cross-Examination.

There was a spot or two, I suppose about a quarter of an acre of my farm, that was water-logged up in the Southwest corner near Paul Smith's place. I believe that it was

the deepening of Bitter Creek that lowered the water in my well. My well is about 28 feet deep and the water in the well before Bitter Creek was deepened was awfully near the top of the ground.

Re-Direct Examination.

I cannot say that the water level on my whole land was within 2 feet of the surface of the ground before Bitter Creek was deepened. The Bitter Creek that was deepened at the time the water level on my ground was lowered was not on my land, but South of my land.

Re-Cross Examination.

I rent my farm this year and crops were raised practically on the whole farm this year.

BYRON SESSIONS, called by plaintiff, testified by deposition:

My name is Byron Sessions. I live at Byron and have lived in this vicinity 19 years, next May. I came here in 1900 to the Shoshone River at the bridge and started the Sidon Canal about 8 miles from Powell. I have continued to remain in that portion of the country ever since up to date. I am a farmer. I have had experience in irrigation and drainage all my life. I first saw the Garland Flats in the latter part of June, 1900. I came up here looking for horse feed for our stock. We had about 400 head of horses. We probably had 200 head that we were working and then there were a great many loose horses. My boys and I had 75 or 80 head of loose range horses. I was looking for feed. I had occasion at that time to observe what is now called Bitter Creek. At that time it was a dry wash.

291 There was no water in it. There was a little spring down, I should think, a mile or a mile and a half below Garland where the water was running probably from the spring for a distance of not more than twice the length of this building. That was all the water I found in Bitter Creek from that time up until the time that the railroad came in. I was probably on Bitter Creek up in the vicinity of Garland between Garland and the mouth of the creek probably 4 or 5 times a year. There was no water running in the creek during those times, except, of course, from rains and storms which was simply a temporary flow lasting from an hour or two to a day. They started grading

on the railroad in 1900 in the month of December, I think about the 20th. I took a contract with others to build about 20 miles of the grade. From that time on I think I probably saw Bitter Creek five or six times a year. On none of these occasions did I ever find flowing water in it, only after a storm. When a severe storm came here the water would accumulate off of this Flat in here and run into Bitter Creek. I think it was in 1903 that I was under Government employment to investigate the soil of all the land under the system from the dam to the end of the canal down here at Crooked Creek. My work was to dig holes to demonstrate the depth and character of the soil and keep a log of it on every quarter section. I dug such a hole on every quarter section of land bordering on the banks of what is called Bitter Creek. I then gained an intimate knowledge of Bitter Creek throughout its entire length. I was about two months at that work but all of the time wasn't spent in digging test holes and reporting on the land. I was also instructed and empowered to buy these farms out that the waters of the Shoshone Dam covers and went to every home and took an invoice of everything from a chicken to log chains and was authorized to appraise them and report on them, giving them a written report on the valuation of their property. I sent them to Mr. Ahearn and he would pay them that money and take their farms. My employment was such and it was a part of my business to observe Bitter Creek along its entire length. I was instructed by Mr. Ahearn to report on any and all living waters within the Reclamation system. I don't exactly remember how far above Garland there was a well-defined channel for Bitter Creek, but as I remember we would drive across this bottom, taking a tier of quarter sections and with my son in a buck-board would drive across one tier of quarter sections and then drop down and take another tier of quarter sections and come back. I can't remember any defined channel more than half or three-quarters of a mile above Garland and it got rougher and there would be little branch draws come in or little washes that would be all the way from 6 to 10 inches deep, some of them, where they would come together to form the channel for Bitter Creek. There was no well-defined channel or marked channel that could be considered any creek or Bitter Creek above Garland further than half a mile or a mile. We drove right across them in a wagon or buck-board North and South. There was no living water in any of these draws except after a rain storm. At times there was running or living

water in these channels in the Spring when the snows were melting. Some years there wasn't any. For the first few years there wasn't any living water. When there was living water it would last for half a day. I think we had one freshet when we were building the canal that lasted practically a day and a night before it quit running. I have been up and down the so-called Bitter Creek in the Spring and in the Winter and there was no running water in the creek in the Winter or in the Spring. There has not been sufficient snow during the last 18 years that I have lived here to produce running water in this so-called Bitter Creek. I can't answer accurately the length of Bitter Creek to the point above Garland that I mentioned but in my judgment

293 from the place it would be considered to be a wash to where it empties into the river it would be about 5 to 6 miles long. There is no permanent source of water supply of any kind to Bitter Creek. There are no streams that form a source for it. There is not sufficient snow deposited on the breaks near the bench to constitute any supply of water for Bitter Creek. I am acquainted with the amount of snow and the amount of water produced every year since I have been here. I have a record at my home of my estimate in regard to the amount of snow that has fallen in Byron each Winter I think for the entire time since I have been here. It is just a rough estimate for my own satisfaction. The rain fall and the amount of snow, should it all melt and run down Bitter Creek, are not sufficient to produce a water supply in Bitter Creek. During the time that I was here there was not enough water, either standing water or running water, in Bitter Creek, to water the work horses that are used except for a short time after a heavy rain storm. There were pools below Garland and I guess probably above Garland as far as the wash went, where, in case of a heavy rain or flood on this Flat, water would gather and go into Bitter Creek where it would wash out pools in the turns of the creek where the water would remain about a week or two weeks, probably longer, but there were just pools of stagnant water.

As to whether there has ever at any time been a supply of water in Bitter Creek sufficient for irrigation, I can say that if a man had a farm all plowed up and laid off and the dams laid off in his irrigation ditches, he could have done quite a business in some of these storms where the flood water had come down from Bitter Creek. I had charge of the building of the Sidon Canal and we made

provisions at what we term now the mouth of Bitter Creek where you come down off the bench here on the bottom land to take care of flood waters from Bitter Creek by throwing a dam across Bitter Creek and letting water go down and out on that flat country and we made provision
294 for it to cross our canal and go off in the river. That is the only supply of water in the creek that could have been used for irrigation and just the same provisions were made for it as in the nearest draw further East, just the same as any dry gulch in this country on either side of the river. When you talk about water in that, it is all nonsense. We had a dam there and when the water came you let it go out. But there was no other provision made for the accumulation of water in Bitter Creek until the Reclamation Service came. Prior to the time the Reclamation Service turned waste water or seepage water into Bitter Creek, there were no trees or willows or grass or vegetation that usually grows along the streams of water along the banks of Bitter Creek except right at the mouth less than 100 feet from where the bridge crosses Bitter Creek there was a little cottonwood tree, probably as big around as my thigh at the butt and there is where I got my information in regard to the possible flood waters of Bitter Creek before I put that dam in. I found on the very butt of that little cottonwood tree that was growing there sage brush and greasewood roots that had come down sometime in a flood. I could understand readily from the grass that was in among the roots that it was put there with flood waters. Therefore, we put that dam across there and made provisions for the flood waters of Bitter Creek. If there had been a natural stream or any flow of water in Bitter Creek from any constant source I don't know why there shouldn't have been a growth of willows there. There is on every other natural stream. It is a characteristic of any stream where there is living water, at least in 99 out of every 100.

I have had experience in drainage. It is my judgment that without drainage there would be no Garland or Powell Flat that would be of any particular value, only a streak around the outside. It would be in the condition that
295 we are now in at Byron. That is all we have now at Byron is just a streak on the river bank of farms that are producing. I have 190 acres of land there and there is probably 50 acres of it that is producing. The rest is absolutely worthless. I know about the drainage system that

has been established here on these Flats and I know that they were not producing prior to the drainage here, but that they are producing now. It is very evident that you have got to have Bitter Creek as a chief central drain to carry off the drain waters. It would have to be right there on Bitter Creek where Nature has placed it.

Cross-Examination.

Nature has placed Bitter Creek as a natural drainage system for it may be about 40 square miles of territory. I am not certain. They do have very severe storms once in a while up in this country and the drains all come down to Bitter Creek. We could flood the country a little bit with the dam or embankment we built down where it runs into the river. There is a natural channel, or natural drain, for this country from just above Garland to the river with nice defined banks from Garland down. There is an embankment probably 100 feet long built by the railroad company above the town of Garland for the purpose of protecting Garland from flood waters from this part of the country. I do not say that there is no natural channel for Bitter Creek above Garland. I said that probably from a mile to a mile and a half above Garland there was a natural channel. The drainage system for all this basin above Garland just naturally comes together just above Garland. Nature has so fixed the soil that the water comes in just above the point where this natural channel commences. There is no natural channel whatever above that; none but that you could drive a team and buck-board across it. I do not know that there are bridges constructed as far up as Caldwell's place across the channel. I have never seen them. I do not know if it was necessary for the
296 farmers for 6 or 8 miles above Garland to dig down the banks so that they could cross the channel. When I first knew that channel they called it Bitter Creek wash. Everybody called it so that talked of it at all. This man here and all these men here called it so. This man here came to this country about the same time as I did, but I don't remember just now when. He called it Bitter Creek wash because that was all there was to it. There are no names for any of the washes in the basin that are tributary to Bitter Creek—not that I ever heard of. I said there were little washes out here on this Flat all the way from 3 inches to 6 inches and possibly a foot deep that come in there above Garland and they came in from every point of the

compass excepting the East. When I went across it first there was no grass in the basin from one end to the other. There was salt sage on it but there was no evidence of living water and I want to say to you that there never was any until the Government got at this Reclamation project. There wasn't any other dry wash that went into Bitter Creek that had a name. There was only one Bitter Creek wash and that was from about a mile to a mile and a half West of Garland to where it reaches the Shoshone River.

I was employed by the Government in 1905 for about two months. I traveled all over the Reclamation project from the Shoshone dam to pretty near Crooked Creek on the East here beyond Powell as far as the Project went at that time. I would not see storms up in this country very often at that early day. In 1900, the first year, we had no storms to amount to anything. As to the next year I don't know. It rained a little and snowed a little, but nothing very severe that I remember of. There are no springs at the head of Bitter Creek up at Mr. Gowey's homestead where the big
297 bench is I guess there are mud springs. I kept a record of the amount of snow that fell at Byron.

Byron is about 15 miles down the river from here. I have never seen a living stream in this country without willows and trees growing on the banks. There may be places on the Platte River that haven't trees or willows growing on its banks, but there are miles and miles that have.

Re-direct Examination.

There are no streams within the drainage basin of what we call Bitter Creek that contribute any water to Bitter Creek. I have been acquainted with Bitter Creek basin for the last 18 years and have known it every year.

SCOTT H. SESSIONS, called by plaintiff, testified by deposition:

My name is Scott H. Sessions. I live at Byron, Wyoming. I am the son of Byron Sessions. I am 34 years old. I came to this country with my Father and engaged with him on the work that he was doing up on those Flats and also helped him in the work he did for the Government. I had every occasion to observe the hydraulics and the condition of the Flats surrounding Garland and Powell. I

know the dry wash called Bitter Creek. There was no water in it when I came here first. There was never any living water in it prior to the date that the Government turned its waste water into it, except that due to a sudden freshet or flood. I used to herd horses for the Canal Company when we first came out here on this Flat around Garland and around that little spring below Garland, and we would water them at the Shoshone River in the evening and take them back in the morning. There was not sufficient water where we herded horses to water them in Bitter Creek. I herded horses up here on these Flats about 3 months. I have also hunted antelope on these Flats and I had an opportunity to ride over Bitter Creek and ride to watering places in order to catch the animals after 298 they came in to water. There was no living water in Bitter Creek those days only that little spring just below Garland. It runs in the Spring of the year about 50 or 100 yards where it comes out and in the Fall possibly 50 feet, and that constitutes the only living water in Bitter Creek except what remains from the storms.

I lived in Garland for a long time. I used to run a butcher shop in Garland. They had a well drilled in Garland in front of Banker Thompson's hardware store and when anything went wrong with that well, they drove the animals across the railroad to the rain water that came down at the barrow pit. They watered them there and when that was dry they drove them to the river. I was engaged with my father in the work of making soil examinations and while engaged in that work I had an opportunity to see all the washes and gullies that could possibly contribute to Bitter Creek; that is, I traversed every quarter section of the entire drainage basin of Bitter Creek and dug a hole in each quarter section and had an opportunity for the most minute examination. I never found any living water in any of the washes or draws that could contribute to Bitter Creek. The channel of Bitter Creek extends from the Shoshone River about 6 or 7 miles to a point, I judge, about two miles above Garland. Above that there is what I would call a well-defined channel. There are washes running from different directions, but not what I would call a well-defined channel. There is nothing within the drainage basin of Bitter Creek that could constitute a permanent source of water. There are no springs which contribute water to Bitter Creek. I do not think that there are any snows which could form a source of water to Bitter Creek in the

Springtime while they were melting. I have had opportunity to observe snow in the upper portions of this drainage basin every year I have been here and sufficient snow does not form there to form a supply of water in the melting season sufficient to reach Bitter Creek. Along the banks of Bitter Creek there were formerly no grasses or willows or trees or the usual vegetation that grows along the banks of creeks and streams. I don't know whether there are now. I haven't been along Bitter Creek since the Government took the canal out below Garland. The trees below Garland are below where we used to ride across, I should judge maybe a quarter of a mile from where the bridge crosses now coming to Powell and in the neighborhood of the springs located there. They got their supply of water from the spring but not from the creek.

Cross-Examination.

I would take hydraulics to mean the lay of the country. I have lived at Byron 18 years. I am 42 years old, not 34. That is, I will be 43 years old in March. I hunted antelope in this country in the Spring and Fall. I know they had flood waters in this part of that country that came down at times in a pretty swift current and overflowed the banks. I mean to say that the water covering this 33 square miles of drainage territory in times of flood did not wash out a well-defined channel up above Garland above Mr. Caldwell's place.

WILLIAM BLACKBURN, called by plaintiff, testified by deposition:

My name is William Blackburn. I live right at the mouth of Bitter Creek. I moved there in February, 1907, and have lived there ever since. At present I am carrier of United States mail from Penrose to Garland. Prior to my moving to the mouth of Bitter Creek in 1907, my business was any kind of work. In the Fall of 1902 I herded sheep for Mr. Gantz and in the year 1908 I was a locator here on this Flat; located people. There is quite a number of them that are acquainted with me; just had a little office in Garland and located the people on homesteads. I located them all over the Flat here through the center or heart of the Government's Reclamation Project. This was during 1907 and 1908 until Mr. Stickler took hold of the Project and commenced to locate them himself. I

have had an opportunity to observe Powell and Garland Flats and Bitter Creek for the last ten years. When I was working here upon the Flats and locating homesteaders upon them, there was no water in Bitter Creek except during rains—a storm or anything of that kind. There was no water that flowed from any natural source in Bitter Creek. When I located my homestead at the mouth of Bitter Creek there was no water in Bitter Creek except that spring just below Garland. There was nothing above the spring in the way of running or living water. The only water that was above the spring was the water that might flow from a rain or simply stand in pools. You could probably trace out a channel about two or two and a half miles above Garland. There wasn't any well-defined creek or channel anywhere above that that I remember. When I first came here there were no trees, willows, grasses or other verdure along the bank of Bitter Creek. It would have been a big thing to me if I could have found any spring there because it was my bread and butter to get something that would please the settlers and I had to carry a water bottle with me all the time during the hot weather and in the Spring. If there had been any water to be used for irrigation it would have been a great help to me and I would have found it because I was looking for it. I have never seen any springs upon this Flat within this basin of Bitter Creek that could supply water to it. If there had been I would have seen them. During that time I have been familiar with the amount of snow and rain fall here. Occasionally there would be melting snow in the spring sufficient to produce a stream of water that would reach down to Bitter Creek—that is
301 when there came an extremely hot sun the snow would melt very rapidly and that would be all. I don't remember how long it would run. I have carried the United States mail from Penrose to Garland over ten years. I have had to cross Bitter Creek at Garland every day since the mail was run and I don't remember any living stream until the drain waters of the Reclamation Service came in. In case of a heavy snow over the Flats where it would drift into the gullies and there would come a period of intense heat the snow would melt rapidly and it would produce some running water as long as it took to melt the snow off and then it would stop.

Cross-Examination.

I came into the country in 1902 and settled on the place where I am now living in 1907. Before 1907 I lived at the North of Coon Creek across the river from Byron. I was herding sheep for Mr. Louis Gantz and I located the sheep wherever you could find a little water. I know Mr. Earl Kysar. I believe I located that gentleman. I couldn't just exactly say where I located him. It is North and a little West of Garland, I believe. I don't know where Mr. Caldwell's place is unless it is the school section. I couldn't positively state where Mr. Kysar's place is located in relation to Mr. Caldwell's place. I can't say just exactly off-hand where it is. If I had my record here I could do it. I took Mr. Kysar over there. As to whether Mr. Kysar and I had to go around a good ways before we could find a place to cross Bitter Creek channel I would say that in some places it was two feet deep, in other places a foot and a half, other places not even that, just where it has gone over the grass. This indicates that big rains and floods had washed and run down there.

J. H. HINCKLEY, called by plaintiff, testified by deposition:

302 My name is J. H. Hineckley. I live at Cowley, Wyoming. I am the State Senator elected from this District and formerly served as a Representative in the Legislature. I came to this country in 1900. Since then I have had occasion to travel some across Garland Flats. I am not extensively acquainted with the topography of the country. For 18 years past I have had opportunity to observe Bitter Creek and have seen it frequently all the time during that period. Prior to the time the Government turned its waste water into this draw, I think there was no running water in Bitter Creek. The first year I was out here we came from Bridger and they told us to take the upper road to the head of the Sidon Canal. I was freighting and we kept too high and came off on the old freight road which came across the Flat from Garland to Cody. We camped just beyond what is now called Garland and came up through the Flat into a little wash there below Garland to find water, and we couldn't find any water. We were all night and nearly all the next day without any water, and that is the wash that is now called Bitter Creek, and there was no water there at that time. Since that time I have never seen any living wa-

ter in Bitter Creek other than what might come down in a rain storm until the Government started to irrigate the Flat here. I would say there never was any water in the creek until the Government started. There was, as has been said in previous testimony—There are little seeps down below Garland. The water stood in the creek there the first Summer we were here. I have had no occasion to see Bitter Creek above Garland. I never have been up there to see what the condition was around Powell; that is previous to the settlement here. I have been across the Flat a few times since, but never before the settlement here. I couldn't say that I have ever been up on the Northern and Western portions of the Flats that would constitute a drainage basin for this draw. I have been across the Flats several times to Cody but I have never been cut next to the bluff or up on the bluff or up to the natural water draw. I would say there never has been any running water in the draw any time of year except that which is produced by some rains or squalls because I have never seen running water in Bitter Creek previous to the time the Government started to irrigate this Flat.

C. A. WELCH, called by plaintiff, testified by deposition:

My name is Charles A. Welch. I live at Cowley, Wyoming. I have lived there ever since it was located about 16 years. We were there two years before we had the town located. I am a farmer. I am also County Commissioner of Big Horn County. During the time I have lived here I have had an opportunity to become acquainted with the lower part of the Flats called the Garland Flats and the Powell Flats. I was engaged in the building of the Sidon Canal. Since building that canal up until the present time I have had opportunity to observe Bitter Creek. Prior to the time the Government turned its water into the creek there was no water in Bitter Creek except in a rain storm. Had there been, I would have observed it. The only water that ever runs in that creek is that produced by a sudden rain storm in the Summer.

Cross-Examination.

Cowley is in Section 32, Township 57 North, Range 96 West about 15 miles from here. I went to Cowley before there was a Cowley, and have been living there ever since.

Re-direct Examination.

We started the Sidon Canal on the 28th day of May, 1900, and that Summer we built the Canal across Bitter Creek. We just threw up a dyke and stopped that creek off; that is stopped the water off—there was no water in it—and then we went above and just built a little dyke in this dry bed to
304 turn what flood water should come down so it wouldn't get into our canal. That was all that was required to do to take care of any flood waters that might come down in time of storm to keep it from injuring our canal. That was all we had to do until the Government turned in water, and then we had to fight Bitter Creek.

J. B. WASDEN, called by plaintiff, testified by deposition:

My name is J. B. Wasden. I live at Penrose and am at the present time Road Supervisor. I came here 14 years ago this Fall in 1904. I have knowledge of Garland and Powell Flats and Bitter Creek since I have been here. I have had occasion off and on to be around over that portion of the country during the past 14 years and to observe Bitter Creek. From 1904 when I came up here up to the time the Government turned water into this wash, there was no running or living water in Bitter Creek. I say that absolutely and my opportunity for observation is such that I could not be mistaken: I have seen from the snow melting in the spring that there has been at times water running down the creek. This snow was over the entire Flats. The snow was already drifted into the bed of the draw and this would occur in any dry wash upon the Flats anywhere and that flow would last during the period of intense heat. In case of a cloud burst or any freshet of that nature the creek does the draining for this part of the country and naturally the water seeks to make its escape through the channel. Outside of that there never was any water in Bitter Creek.

• Cross-Examination.

Penrose is about 9 miles a little South of East of us down the river. I have lived there 14 years. Have been Road Supervisor four years, and my business before that was farming.

W. F. KEMP, called by plaintiff, testified by deposition:

My name is W. F. Kemp. My present residence is Cody, Wyoming. I am in the employ of the United States Reclamation Service. Have been such for five years. I am one
305 of the surveyors and engineers. As such surveyor and engineer in the pursuit of my duties I made a survey of the land which was covered by the spoil banks on the A. W. Ide unit. This map, plaintiff's exhibit 10, represents the area of uncultivated land which was measured in the year 1918, and also shows the additional area which was used in deepening the channel of Bitter Creek and constructing the Bitter Creek canal. This map shows that the area of unused or uncultivated lands on the banks of Bitter Creek prior to the deepening of the creek was 5.04 acres. The total area covered by the spoil banks including the original uncultivated and uncultivable land is 7.42 acres. The amount of the additional land which was used by the Reclamation Service in building the spoil banks and deepening Bitter Creek is 2.38 acres so that the additional land which was actually used and destroyed in the construction of this canal and the deepening of Bitter Creek is 2.38 acres. This map, Exhibit 10, is an accurate map of my survey, showing the uncultivated and unused lands prior to the building of the canal and the deepening of Bitter Creek and then the amount in addition that was used in deepening the canal. (Map offered in evidence, plaintiff's Exhibit 10).

Cross-Examination.

I made this map on November 22, 1918. I made the first survey of the uncultivated land on July 1, 1918. I mean by uncultivated land the land that has not been cultivated and is not fit for cultivation; that is, rough and cut up land. I mean cut up by being rather steep slopes—that was the Bitter Creek channel—and one large area at the upper end as you will notice there; that is between a small wash and the main branch of Bitter Creek at the present time. That was uncultivated and that was where the largest individual area was. That uncultivated area is part of Bitter Creek. It is a high piece of land between two channels of Bitter Creek.

306 There are two channels; that is, there are two drain washes. One is the main channel of Bitter Creek, now the Bitter Creek drain, and this wash to the West is a channel the water had run through at some previous time. The red marks show the cultivated and the uncultivated area that was rendered useless. The embankments were thrown up

along Bitter Creek on Mr. Ide's place. The dirt was deposited on each side of the excavated channel. On the Northerly part of this Bitter Creek as shown by this map there are several areas where there are no red marks. There were no banks thrown up except for a short distance at the upper end and the lower end as shown on the map. As to whether this map shows a distance of 500 feet where no banks were thrown up, I can say that the banks were not outside of the uncultivated area. That is not a part of Bitter Creek. That area lies between the wash of Bitter Creek and the main channel as it now is. This map shows that in the construction of the banks there are 7.42 acres not cultivated.

Re-direct Examination.

I made this map and these surveys for the purpose of determining how much land subject to cultivation would be used in building this canal and deepening this ditch. The object was to survey before the ditch was built all land which was waste land and then afterwards to survey all the land which was occupied by the ditch banks and the ditches and the Bitter Creek drain. I first made a survey to determine the amount of waste and useless land that was along Bitter Creek or Mr. Ide's place and the map shows that on the portion colored yellow. After they built the canal they threw dirt upon the banks and then I made another survey to include the additional land which was rendered useless by this work. And the land in addition to the useless and waste land that existed prior to the building of the ditch is indicated on the map by the red portion thereof. I 307 have stated on the map that the amount of the useless and waste land which was there along Bitter Creek prior to the time that the ditches were constructed and the creek deepened amounted to 5.04 acres. In addition to this 5.04 acres of waste land the Government used in constructing this ditch and in deepening Bitter Creek 2.38 acres more. This 2.38 acres was not waste land. The only land which the Government used which was cultivated land amounted to 2.38 acres.

Re-cross Examination.

Before I worked for the Reclamation Service I was engaged in civil engineering. I have done very little farming—none for myself. I made these surveys by myself alone. One survey was made in July and one in Novem-

ber. I was the judge of the waste lands at the time I made the surveys. Mr. Ide was not with me, but I had a party working with me, the engineering party. They were Alvin Campbell and Mr. Demming. They were under my charge, and did what I told them to do.

W. G. KROPP, called by plaintiff, testified by deposition:

My name is W. G. Kropp. I live on my homestead about a mile West of the townsite of Garland. I have been living there since the Fall of 1914 and have been cultivating the farm since that time. Bitter Creek makes a South line of the farm. In the Spring of 1915, I filed on a 40 acre homestead and of this a 10 acre tract near Bitter Creek was seeped and in the Spring of 1915 it was so wet I could not cultivate it that year. The land above it I should say for 50 feet was also seeped. The rest of my land was threatened with seepage. It was getting close up around the house, a quarter of a mile from Bitter Creek. The water plane was very near the surface of the ground. They started to deepen Bitter Creek along my place in the Summer of 1915. The result of deepening was that that piece of land was drained so I could farm it that year. The water went down from 4 feet and a half to 8 feet according to the well at my house.

308 The piece of land adjoining Bitter Creek has never bothered me since. I have farmed it ever since that drain was made. My house is a little over a quarter of a mile from Bitter Creek. Right across South from me other lands were threatened with seepage. It was practically the same as on the North side. They are farming it now and as far as I could say it was the result of the draining of the land.

Cross-Examination.

The headgate that took water from Bitter Creek to irrigate the Garland townsite is located about three fourths of a mile above and West of me on Bitter Creek. Bitter Creek flows down past the headgate of the Garland townsite canal and then down past my place. No tile drains have been built near me since I have been there. Before I came there was a tile drain running into Bitter Creek coming up from the Southwest down through the Robinson place which corners with me there—possibly 2 to 4 feet above my line. It emptied into Bitter Creek. It did me no good, however, because it is on the other side of the creek. I know nothing about Mr. Ide's land.

H. H. JOHNSON, called by plaintiff, testified by deposition:

My name is H. H. Johnson. I live at Powell, Wyoming. I am a Civil Engineer by occupation. I have been here connected with the Reclamation Service since July, 1911, 7 years. As an employee of the Reclamation Service I kept a record of the flow of water in Bitter Creek. I have these records with me. This record, Plaintiff's Exhibit No. 11, is a continuous record for an 8 day period which shows the fluctuation of the surface water of Bitter Creek over the weir which is used as a means for measuring actual flow of Bitter Creek. These records which I have in my hand show the actual fluctuation of water and the measurements of water in Bitter Creek from July 23, 1918, until October 18, 1918. The records are still being continued from that
309 date. It shows the fluctuations of water continually over that period. I show upon the records here the days upon which any storms occurred which materially affected the flow of Bitter Creek. The first storm affecting the flow of Bitter Creek was July 25, 1918. It began at 9 P. M. of July 24 and lasted, as near as I can tell, about 7 hours of continuous rain. The record of the amount of rain that fell during that storm shows 1.05 inches. The average rain fall at Powell varies from 5 to 9 inches during the year. The rain fall in the storm of July 25, 1918, would be from 1/5 to 1/9 of the entire rain fall for the year. This record shows that at the Bitter Creek weir the run-off from that storm began about 2 A. M. on the morning of July 25, and continued through the night and reached its maximum at about 1 P. M. of July 25. From that time it went down to the minimum about midnight of July 25. It took about 20 hours for this storm water to pass over the weir. The next storm occurred on September 23 and 24. It began at 3 P. M. on the 23rd and ended at 6 A. M. on the 24th. During that time 1.17 inches of water fell. This storm and the other would constitute practically one-third of all the water that falls in an entire season. My records show that it took this last storm approximately 29 hours to run off the weir. Since the 25th of July to the present time there have been no other storms that have affected Bitter Creek to an extent that it would show over the weir.

These maps also show the three showers which go to make up the flow of Bitter Creek throughout the irrigation season. They are the amount of water which is put into Bitter Creek by the waste from the canal system; the amount of water which is discharged into Bitter Creek by the flow from the

drainage system, and the amount of water which is put into the creek by the run-off from the farms which is usually termed "farmers' waste." The records show the number of second feet of each kind. The amount of water that
310 is drained into Bitter Creek from the farmers usually increases during a storm. During a storm they don't have time to send [wood] to have their water shut off, and they can't handle it, so they just turn it loose into Bitter Creek. The records show that there is a great amount of actual farmers' waste flowing into Bitter Creek at the time of a storm—greater than immediately preceding or immediately following a storm. The farmers' waste that runs into the creek is measured as follows:—the flow of Bitter Creek is really made of four factors instead of three as previously stated, the fourth factor being the run-off in the drainage area and the other three factors, the waste in the canal system and the water put into the creek from the drainage system. We have installed at the end of the main canal, also at the end of each of our laterals in most cases, weirs so that it is possible for us to tell exactly the amount of water that is passing out of our canal system as waste. We also have them installed at each one of the ends of these drains which empty into Bitter Creek, by which we can tell the amount of water passing from these drains into the creek. Except in case of a storm the amount of water put into Bitter Creek is made up of three factors, farmers' waste, canal waste and water put in by drains. We have accurate measurements of the canal waste and the drain waste. The remainder of the water which is put in the creek, except in time of storm, is put in there by farmers' waste. The sum of the amount of water put into the creek by waste from the canal system and the amount of water put into the creek by the drainage system subtracted from the total amount of the water put in Bitter Creek gives us the amount of water that is running in the creek as farmers' waste. There is no other
311 water that runs in Bitter Creek outside the waters I have mentioned, except the storm waters. There is from my observation no natural flow or source of water into Bitter Creek. There would be some return flow besides farmers' waste that drains into Bitter Creek from the side of it—Bitter Creek acting as a drain. This flow is computed in the flow of the drainage system. That is, it would occur all along with the rest of the drainage. We can have accurate estimates of the waters at its sources in this creek. It is a part of my duty to know in keeping these records and in making investigation whether there is any

other source of water going into Bitter Creek and I have made such observations ever since I have been on the project and from these investigations I have never found any other source of water flowing into Bitter Creek. (Plaintiff offers in evidence Plaintiff's Exhibit 11A.)

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Cross-Examination.

The only tests I have made for water in the Spring time before irrigation was put in was for mere observation in connection with my other work on the project. That other work consists of various things, construction work and maintenance and operation work. It takes me almost entirely over the project. During the last three years I have been mostly at Deaver. I think I began working around Deaver in November, 1913, and returned about May this year. During that time I haven't been up around Bitter Creek to amount to anything except what I observed as I crossed down there. Deaver is about 12 miles from Powell. In some cases it is a fact that after a heavy rain and within the next day the farmers discontinue using water. There is no record of the area the rain of July covered, but it was a general rain. The only place the records are kept is here in Powell, but from what we know of that rain in connection with my work the rain was general. We have canal riders stationed throughout the project at different places which cover the entire project, and at the time of a rain it is necessary to call up these canal riders immediately and find out what amount of rain there is in their particular locality so we may know what to do with the canal system. These records show the normal flow of Bitter Creek before and after a rain. I could tell the number of hours before the water reached Bitter Creek by my record where it shows an increase in the flow of Bitter Creek. Rain will cause an increase generally because of the amount of waste that is turned in by the farmers. The only way I have to separate the flow from the rain and the flow from the increase in the surface waste at the time that the creek would run normal during the time of the rain. The increase comes from the increase in waste water and from the rain. I have no way of measuring the amount of increase from the waste or

313 measuring separately the amount of increase from waste and the amount of increase from rain. The observation in July was the measurements that were made about 2½ miles below Garland. The same situation existed in September. The increase shown was during the time of

the rain and for a certain period after the rain had stopped. I have no way of telling exactly how much of this came from the surface water of the farmers. The area between Powell and Garland is pretty well cut up with ditches—irrigation ditches and laterals. These ditches and laterals will have a tendency to obstruct the flow of surface water to a certain extent.

H. H. JOHNSON, recalled by the plaintiff, testified by deposition:

On the 20th of November this year I made an accurate computation as near as I could from very accurate topographic maps of the total number of acres within the drainage basin above Caldwell's land. That area is 33 square miles. The area drained above the Garland townsite diversion is 39 square miles. I had charge of the construction work of the lateral A extension. This canal runs along the bench around the foothills at an average of about two miles from the top of the bench. If a rain storm came the waters of which would flow into Bitter Creek drainage basin, it would have to cover an area not further than from two to four miles away from the great bulk of the canal system of that portion of this project.

Cross-Examination.

I have formed my opinion of the area of this water shed from very accurate topographic maps. They were made of every mile in the project under the supervision of Mr. Ahearn, I think, who was the first Project engineer. The land which drained into Bitter Creek directly West of Caldwell's school section lies North and West of Powell and entirely North and West and a little bit South from
314 Caldwell's school section, except there is a very small portion South of Caldwell's school section. The number of sections that drain North and West of Caldwell's school section into Bitter Creek is 33. Between 23 and 25 square miles of the irrigable area of the Garland Division of the Reclamation Project drain into Bitter Creek West of Caldwell's school section. At the time I made my estimate I did not try to separate the amount that drained from the irrigable part from the amount that came from the bad lands. There are probably not more than $4\frac{1}{2}$ or 5 square miles that is actually tributary to Bitter Creek South of Caldwell's school section. From this project map I decide that about $6\frac{1}{2}$ square miles of land South and West from

the Southwest corner of the Caldwell School section drains into Bitter Creek. All of the other land that drains into Bitter Creek from Caldwell's section lies South and West of the Southwest corner and that comprises a certain amount of irrigable land lying between Caldwell's section and the bench.

My continuous record will show how we estimate the normal flow of water in Bitter Creek. It will show exactly what the normal flow is. As the record shows the line with peaks and low points, normal flow would be the average between the peaks and the low points. In reference to my testimony about the heavy rain of September 23, when the flow began and increased and continued for 29 hours until it reached normal, I mean by normal until the flow came back about to where it was when the rain started. I did state that the farmers after a heavy rain fall discontinued the use of their irrigation water. The creek did not reach below normal because the farmers discontinued the use of the irrigation water at the time of a storm, but would rather have a tendency to be above normal. The storm of September started about 3 o'clock in the afternoon and my recollection is that the storm water reached the weir about 8
315 o'clock in the evening. In the September storm it took 29 hours to reach normal. This normal line is reached by taking the average of the peaks and the low capacity of the ditch as near as one can get to the flow of the stream. We have measuring devices at the end of each drain. We can't tell how much flows in, but we can tell how much comes out at the end of each drain.

CHARLES M. JUMP, called by plaintiff, testified by deposition:

My name is Charles M. Jump. I live at Powell. I am Superintendent of irrigation for the Shoshone Project. Have been Superintendent since March, 1909. I came to the Project March 24, 1909, and have been here constantly ever since then. My duties as such Superintendent consist in the operation of the system, the operation and maintenance of the system—that is, to take charge of the water and deliver the water to the individual farm units, keep the records and compile all the data necessary for that portion of the work. I had 15 years experience in this work prior to coming to this Project. It was in Colorado. I was a canal rider or ditch rider as we call them in Colorado for about

6 years and then for 3 years I was superintendent of the canal, and then I was for 6 years Water Commissioner for the State of Colorado. My life work has been the management of irrigation projects. I came here and instituted the delivery of water to the farm units and since that time have been engaged in that work.

My work has taken me constantly over the entire irrigation system. During that time I have had occasion to observe the dry wash called Bitter Creek. When I came here in 1909 it was a fairly well defined channel for about .2 miles above Garland. From that point on West there were small ravines or coulees as I call them leading in different directions until they finally got into what I would call
316 a defined channel. There was no water running from any source in Bitter Creek when I came here. My work calls me over the portion of the project included in the drainage basin of Bitter Creek during the operation season mostly every day. I don't go every day, of course to that North end, but three or four times a week. During the peak of the irrigation season which is about two months, I am practically over there every day. If there were any source of supply of water which would contribute to Bitter Creek as a natural flow in that creek, I think I would know it. I couldn't help but see it. There is nothing in the drainage system anywhere that can in ordinary circumstances constitute a natural supply of water for Bitter Creek. There are no springs which flow any water into Bitter Creek to my knowledge. If there were, I would surely know it. I have had occasion to know the amount of snow which is deposited on all portions of the drainage basin of Bitter Creek. There are no collections of snow along the bench or in the gullies leading down from the bench which in any manner of means would be a supply of water or constitute a natural supply to Bitter Creek even in the years when the most snow has fallen. During the 9 years past there might have been a time when there would be a flow from melting snow for a few hours when they had a warm wind early in the Spring, but it wouldn't last very long. It would be just in the heat of the day, say from 10 o'clock to about 4 during the period of rapid melting. There are no extraordinary deposits of snow among the gullies at the bench, only there are a few deep coulees or gullies there that hold a little deposit of snow, but it melts so slowly in the Spring that no water reaches Bitter Creek when it is melting. The water that would result from melting snow would evaporate

and sink into the ground before it would reach Bitter Creek. It would not be possible for these gullies to be full of snow from top to bottom so as to produce a possible flow of water in Bitter Creek. Above the point about two miles from Garland, there is no defined channel to Bitter Creek. I have never seen any head to it. The Government irrigation started here in 1908 in the middle of Summer and since the Government has been operating this system for nine years the channel of Bitter Creek is deepened further up, over two miles above Garland. Part of this deepening was brought about by the deepening of the ditches and part by the water from the system. On those portions of Bitter Creek above where the water is turned in there is no natural growth of grass, willows or trees characteristic of running streams of water.

The drainage area of Bitter Creek is about 33 square miles above the Caldwell diversion and about 7 square miles additional to that above the Lincoln Land Company diversion. My work does not particularly involve the drainage of lands. I have been in charge of gathering data on the area affected by seepage and making statements or reports of the different areas affected by seepage ever since the first seepage developed on the project. I have been in the investigation each Fall since we started the investigation. We found it necessary to have these lands drained or else we wouldn't have had any farming community in this country. I am familiar with the system of drainage that has been established here on the Project. I know the land that is owned by A. W. Ide. I reported 20 acres of his land this year that is seeped or threatened with seepage. I know where Bitter Creek passes through Ide's farm unit. I think this deepening of Bitter Creek would help to drain Ide's land.

Cross-Examination.

I reported 20 acres of Ide's land as seeped. We didn't make a survey but just an estimate. I think that for three or four years I have turned in a certain amount of seepage on that land. I cannot state from memory how much I turned in each year. Last year I turned in 9 acres. This year I turned in 20. There was a tile drain that was put in to drain part of Mr. Ide's land. It helped to drain part of his land. There was no more bog this year than there was last. Ide and I went over that. The way I have been deciding the area affected by seepage

was done by a plane table survey until the last two or three years, but we have adopted a different system. We first send a notice to the farmer asking him how much area he has affected by seepage. If he returns any I go out and look over the area. If he has given what I think is proper I turn that in. If I think he has given in too little or too much, then I go and see the farmer and he and I adjust the matter ourselves. I know more land was turned in this year as water-logged than last year, but I don't say whether there was more land actually water-logged this year than last year. My connection with the drainage part is merely to report to the office the amount of land on each farm that is water-logged. I think the deepening of Bitter Creek would be a benefit.

There is an additional canal that has been constructed on Mr. Ide's land this year. I have seen it. I don't know whether it would be a benefit or not in regard to drainage. If the canal was parallel to Bitter Creek and as deep as Bitter Creek it might drain the land, or the water might go over that canal and go into the gravel soil of Bitter Creek, but of course some of the water would go into it if it was parallel and of the same depth as Bitter Creek. I think Mr. Ide's land was a little dryer this Spring than it was before Bitter Creek was deepened. My duties here consist in the operation of the project, in delivering water to the farmers and in shutting off the water for irrigation purposes. Practically none of my time is taken away from the irrigable portions of the project. It would be impossi-

319 ble to state how many trips I have taken to the bench and around the foothills of the bench. I do not get up to the foothills directly below the bench very often. There is no irrigable portion of the project above Lateral A extension, although in traveling that country up there I can very readily see all the conditions so far as the water shed and drainage of the water is concerned. My duties in the Summertime take me out a great deal upon the irrigable portion of the land. I spend very little time in the office in the Summer time. I shut off irrigation in the Fall at various times. This year, October 5. Last year November 10. It is hardly ever later than the middle of November. My work from the time the water is shut off until the water is turned on again consists mostly in compiling the annual report and records for the season's work. We usually get our report out about the first of February. That is office work. During that time I am mostly in the

office and not on the project. When the weather opens up in the Spring my work is cleaning out the Government laterals and preparing the irrigation system for the irrigation season.

The nearest point of Lateral A extension to the top of the big bench is approximately a couple of miles. This lateral is taken out of Garland canal on the Ralston town-site. From that point to the top of the bench is about 10 miles. Lateral A runs in a Northerly and Easterly direction from the Garland canal to a point where it gets approximately 4 miles from the top of the big bench and then it runs in an Easterly direction. Practically all the land that is irrigated from Lateral A is South and East. The nearest irrigated land to the top of the big bench is about two miles off. Some of the area that lies West and North of Lateral A up to the top of the big bench is drained into the Bitter Creek water-shed. I don't know how much that land is. I cannot approximate the area lying North and

West of Lateral A that is drained into Bitter Creek
320 water shed. I frequently had occasion to be North and West of Lateral A, but my work generally does not take me there. On occasions I went there to see whether I could secure gravel in order to prepare structures for the concrete. I used gravel for concrete in the maintenance of the canal and structures. This year I made two or three trips directly North of here, but have not been directly West. Last year and the year before I went about the Project in a Ford. I generally made the trips North and West of Lateral A in a buggy. I couldn't go with the car. This year I used a team 3 or 4 times for the trip. The two early trips were about the first of April. I can't tell you how many times I went North and West of Lateral A last year. Most of the time I spent on the irrigable portions of the project. I have been up on top of the bench but not in the Winter time. Some of those times were in going to Billings.

My duties require me to keep track of the amount of rain-fall at Powell in my compilation of the annual report and also to keep track of the rain-fall outside of the irrigable portion of the Shoshone Project. I don't keep track of all the water in every sprinkle, but in the case of heavy rain. I must know where it is and what it is in order to protect the canal system. I [gave] 13 canal riders and 11 of them report to me over the 'phone, and in case of a storm I have to know just what it is in order to protect my canal system at the head. Between Ralston and Powell my canal

riders merely ride over the irrigable portion of the land. They do not ride over the lands not irrigated. The moment I see a heavy cloud over towards the Hart Mountain or Corbett or that direction, I get busy on the 'phone. My interest is always in the heavy rains. I do not keep track of the actual measurements. It is true that we have a great many local showers and it may rain in one part of the project and not rain in another. That has been the
321 weather condition ever since I have been here. During the Winter I do not have to watch the snow falls, but we keep track of it as it is measured in precipitation as rain. The progress of surface water or rain water is somewhat retarded in its former natural drainage by the construction of the irrigation works, canals and laterals on individual farms. My wife owns a farm here. I have farmed in the irrigated country of Colorado. Land absorbs more water after it has been plowed and cultivated than in the natural state.

Re-Direct Examination.

It is important for me to know whenever there is a rain storm close enough to affect the project's canals. Lateral A extension and the Frannie Canal are all located near the bench and at points within 2 miles of the bench, so if there is any rain up in that country, it is part of my duty to know it. During the last 9 years every time there has been a rain of any amount up towards the bench I had word of it immediately by telephone from my men stationed there for that purpose. Were it a cloud that looked like rain, I would immediately call up and find out about it. From my own knowledge there is no more rain near the bench and in the vicinity of the draws than there is on other portions of the Flats. This conclusion is based upon reports. I have received them on every storm that has occurred during the time that I have been here. It frequently rains on other portions of the Flats when there is no rain up the draws or on the bench. On the 11th of July I was a mile and a half out from here at the head of Lateral B when it began to rain very hard, a regular pour-down for 15 or 20 minutes. As soon as I got back to Powell and called up the people in the North where it looked like a cloud burst had come from, they said they had not had any rain. Time after
322 time when the clouds appeared over the bluffs and the bench it did not rain. From my observation, I find that the average rain-fall at Powell is the average rain-fall of all portions of the drainage basin of Bitter Creek.

Re-Cross Examination.

I don't know how far North or how far West of Powell the water-shed extends that is drained by Bitter Creek. When I came here in 1909 no water at all in Bitter Creek during the entire year except after we started irrigation and then there was water in Bitter Creek. We had no undersurface drain connected with Bitter Creek at that time. All the water that came into Bitter Creek came then either from rains or from the surface waste water from the irrigation of the farms. I think they started to work on some open drains in this part of the country in the Fall of 1911 or 1912. They did not drain into Bitter Creek but into the river. I think Drain J. was the first undersurface tile drain constructed into Bitter Creek. That was in 1912. In 1909 there was a continuous flow of water in Bitter Creek during the irrigation season.

W. A. DEMMING, called by plaintiff, testified by deposition:

My name is W. A. Demming. I live at Powell, Wyoming. Have lived here 10 years. My occupation is real estate, fire insurance and loans. Have been in that business more or less most of the time I have been at Powell. I first visited Garland Flats in August, 1908, for a few days. At that time I suppose I did see Bitter Creek but I don't remember anything about it. I first saw Bitter Creek in 1908 after I filed here. I saw it at a point about due North of the town of Powell. The particular reason I have for remembering that is that I made a trip out to the farm of Mr. Johnson to see him in regard to a collection, and I was impressed with the fact that Bitter Creek did not turn out to be a creek at all. It was dry. There was no evidence of any water having been in it recently. My recollection was that the
323 time was about the month of May. After I moved upon the Flats I had occasion to see Bitter Creek frequently in the course of my business. It had no natural flow of water that I ever knew of. I never saw it in period of storm. I never saw it with water in it until later in the history of the irrigation project when the waste water was running in it. I have had no occasion to observe the effect of deepening Bitter Creek upon the drainage of the lands adjacent.

F. C. HANEY, called by plaintiff, testified by deposition:

My name is F. C. Haney. I came to Garland Flats in 1901 and have lived here since 1907. When I came to Garland Flats in 1901 I had stock and ranged around on the Garland Flat and on the bench. I looked after my stock myself and I had occasion to travel over Garland Flat at frequent intervals. During that time I noticed Bitter Creek. We had to cross it again and again keeping the stock back from the Shoshone River. We did not want them to cross the Shoshone River, for during high water we couldn't get over to look after them. During these years I was there, there was no water in Bitter Creek only during a heavy rain. I testify to that absolutely. I know of no source to Bitter Creek. I know of no stream or springs or other source to contribute any water to Bitter Creek.

Cross-Examination.

My stock were cattle. I had a home ranch at Jack Morris', at Frannie. My cattle ranged mostly on the big bench above here. They would range down around here during a storm. They would stay up there when there was no storm because there was water up there. I was down here probably once a month. The grass was better up on the bench than down here and there was living water up there, springs and grasses.

324 THOMAS LONG, called by plaintiff, testified by deposition:

My name is Thomas Long. I live at Powell, Wyoming. I came to the Garland and Powell Flats in the Fall of 1900 and then engaged in the mercantile business. I established a store at Garland, being a member of the Garland Mercantile Company. I have lived at Garland and at Powell continuously ever since that time. I have had very considerable opportunity to travel around over the Garland and Powell Flats during these years. During those times I saw Bitter Creek. It runs through the Garland townsite. Prior to the time the Government opened up this irrigation system and began to apply water to the land for irrigation, I never saw any water in Bitter Creek only during the melting of snow or clond bursts or rain or something of that kind. I don't think there was at that time any continuous flow of water in Bitter Creek. There was a spring South of Gar-

land between Garland and the river, a natural spring in the bed of Bitter Creek about a mile, I should judge, South of Garland. It did not produce any flow to speak of in the creek; just a small stream which ran down not over 50 or 100 yards and sank out of sight. Above that stream there was no flow in Bitter Creek. I have never been up to the head of Bitter Creek, but have been up past the town-site of Powell, and further, but never to the head and I never saw any natural flow of water in Bitter Creek as far as I have been up the creek. I never saw any willows or trees or brush growing along Bitter Creek such as naturally grow along a stream of water. I have been familiar with that creek since 1900.

Plaintiff's Exhibits.

325 The following exhibits were offered in evidence by plaintiff and admitted:

326 Plaintiff's Exhibit 1 A is a duly certified copy of the United States patent to Arthur W. Ide, as the same appears of record on page 43 of Volume 40 of Patent Records of Park County, Wyoming, and is as follows:

The United States of America,

To All to Whom These Presents Shall Come, Greeting:

Whereas, the Act of Congress approved August 9, 1912, entitled "An Act providing for patents on reclamation entries, and for other purposes", provides—

"That every patent and water-right certificate [is] used under this Act shall expressly reserve to the United States a prior lien on the land patented or for which water right is certified, together with all water rights appurtenant or belonging thereto, superior to all other liens, claims or demands whatsoever for the payment of all sums due or to become due to the United States or its successors in control of the irrigation project in connection with such lands and water rights."

And it is further provided:

"That no person shall at any one time or in any manner, except as hereinafter otherwise provided, acquire, own or hold irrigable land for which entry or water-right applica-

tion shall have been made under the said reclamation Act of June seventeenth, nineteen hundred and two, and Acts supplementary thereto and amendatory thereof, before final payment in full of all installments of building and betterment charges shall have been made on account of such land in excess of one farm unit as fixed by the Secretary of the Interior as the limit of area per entry of public land or per single ownership of private land for which a water right may be purchased respectively, nor in any case in excess of one hundred sixty acres, nor shall water be furnished under said Acts nor a water right sold or recognized for such excess; but any such excess land acquired at any time in good faith by descent, by will, or by foreclosure of any lien may be held for two years and no longer after its acquisition; and every excess holding prohibited as aforesaid shall be forfeited to the United States by proceedings instituted by the Attorney General for that purpose in any court of competent jurisdiction; and this proviso shall be recited in every patent and water-right certificate issued by the United States under the provisions of this Act."

And whereas, it appears from a Certificate of the Register at Lander, Wyoming, that Arthur W. Ide, is, under the provisions of this Act, entitled to a patent for the Farm unit "G", according to the farm unit plat, or the Lot forty-one R in Township fifty-six north of Range ninety eight west and the Lots forty-one P and forty-one Q in Township fifty-six north of Range ninety-nine west of the Sixth Principal Meridian, Wyoming, containing eighty acres, according to the Official Plat of the Survey of the said land, on file in the General Land Office:

Now Know Ye, That the United States of America, in consideration of the premises, and in conformity with the several Acts of Congress in such case made and provided, has Given and Granted, and by these presents Does Give and Grant, unto the said Arthur W. Ide, and to his heirs, the Tract above described, together with the right to use water from the Shoshone Reclamation Project as an appurtenance to the irrigable lands in said tract.

To Have and to Hold the same, together with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said Arthur W. Ide and to his heirs and assigns forever; subject to any vested and accrued water rights for mining, agricultural,

manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by local customs, laws, and decisions of courts; but excepting, nevertheless, and reserving unto the United States, rights of way over, across, and through said lands for canals and ditches constructed, or to be constructed by its authority, all in the manner prescribed and directed by the Act of Congress approved August 30, 1890 (26 Stat. 391). To secure payment to the United States, or its successors in the ownership or control of the works constituting and appertaining to the said irrigation project, of all sums due or to become due the United States or its successors in control of said reclamation project in connection with said land and water rights, a lien prior and superior to all other liens, claims, or demands whatsoever upon the lands herein and hereby described and conveyed, upon all water rights thereto appurtenant, and upon the right to receive and use water from the reservoirs and canals of said reclamation project, is expressly reserved, reserving, also to the United States all coal in the said Lot forty-one R, and to it, or persons authorized by it, the right to prospect for, mine, and remove coal from the same upon compliance with the conditions of and subject to the limitations of the Act of June 22, 1910, (36 Stat. 583).

In Testimony Whereof, I, Woodrow Wilson, President of the United States of America, have caused these letters to be made Patent, and the Seal of the General Land Office to be hereunto affixed.

Seal
U.S.
General Land Office.

Given under my hand, at the City of Washington, the thirteenth day of March in the year of our Lord one thousand nine hundred and eighteen and of the Independence of the United States the one hundred and forty-second.

By the President:

WOODROW WILSON
By M. P. LEROY Secretary.

Recorded: Patent Number 621832.

L. Q. C. LAMAR,
Recorder of the General Land Office

329 State of Wyoming }
County of Park } ss.

This instrument was filed for record at 4:30 o'clock P. M., on the 29th day of June A. D. 1918.

JAMES W. ROUSSEAU Register.
B. M. ROUSSEAU Deputy.
No. 10192.

330 Plaintiff's Exhibit 1 is a duly certified copy of Permit No. 1189 of Enlargements, in the name of the Secretary of the Interior, taking water from the Shoshone River through an enlargement of the Shoshone Canal, as the same appears of record in the office of the State Engineer of the State of Wyoming, in Book 5 of Enlargements on page 197, and filed for record March 29, 1904, the material parts thereof being the following:

331 Application for a permit to Divert and Appropri-
pate the Water of the State of Wyoming

Water Division No. 3

District No. 9

Enlargement of the area to be reclaimed under the conditions of Permit No. 2111 issued William F. Cady and Nate S[e]lsbury May 22, 1899 and assigned to the United States.

I, Jeremiah Ahern, Engineer U. S. Geological Survey duly authorized by the Secretary of the Interior for [an] on behalf of the United States of America under the provisions of the Act of Congress approved June 17, 1902 (32 stat. 388[)] being duly sworn according to law, upon my oath say:

1. The location and description of the ditch to be enlarged: to cover both the lands described in said Permit 2111 and the tract to be irrigated under the Shoshone [Reservior] Permit No. 492 is as follows:

2. The head-gate is situated in the N. W. $\frac{1}{4}$ of Section 7, Township 52 N., Range 102 W.

3. Said ditch is to be 78.3 (including distributaries) miles long and passes the line as surveyed through the following lands (give legal subdivisions) the same being correctly shown on the map accompanying this application:

(Here follows detailed description by legal subdivisions of the lands through which the canal passes, beginning in Tp.

52, N., R. 102 W. and ending in Tp. 57 W., R. 96 W. of the 6th P. M.)

332 4. The dimensions of said ditch are: Width on top (at water-line) 45 feet; width on bottom 25 feet; depth of water 10 feet; grade 2 feet per mile.

5. Said ditch is intended to irrigate the following described land: under Permit No. 2111.

6. The total area proposed to be irrigated from said ditch being 115,480 acres.

7. Application is hereby made for permission to enlarge or extend the use of water through the above named and described ditch and to divert and appropriate the water of the State as follows:

1. The name of the applicant Secretary of the Interior.
2. The postoffice address of the applicant Washington D. C.
3. The use to which the water is to be applied is irrigation, development of power, [domestic], mechanical, municipal and other beneficial purposes.

The name of the ditch or canal is The Shoshone Canal.

*5. The source of the proposed appropriation is Shoshone River and the head of the proposed extension is located as set forth in paragraph 2 above the enlargement necessitating the substitution of a new line for the original canal proposed under the conditions of said Permit No. 2111.

333 6. The said ditch or canal as enlarged is to be 78.3 (as given above) miles long and to pass through the following lands (give sections, townships and ranges): the same as indicated in reply to paragraph 3 above.

7. The dimensions of said conduit are to be: (at head gate) Tunnel, width on top (at water line) 12 ft; width on bottom, 12 ft; depth of water, 12 ft.; grade, [3,696] ft. per mile.

In Shoshone Canyon there will be eleven tunnels, varying in length from 223 feet to 2164 feet, and of a total length of

*If the proposed work is to be an extension of the original ditch, give the location of the head of the extension by courses and distances from the nearest Government corner.

9485 feet. These tunnels will be connected by canals of the following dimensions: width on top (at water line), 15 feet; width on bottom, 9 feet; depth of water, 12 feet; grade, 3.696 per mile. The total length of these canals will be 6216 feet.

Beginning at a distance of 5723 feet from the head gate there will be one section of canal of the following dimensions: width on top (at water line), 48 feet; width on bottom, 18 feet; depth of water, 12 feet; grade, 1.056 feet per mile. Length 2286 feet.

Beginning at a distance of $\frac{1}{3}$ [miles] from the head gate the dimensions of canal will be: width on top (at water line), 64 feet; width on bottom, 40 feet; depth of water, 8 feet; grade, 1.056 feet per mile. The length of this section will be $19\frac{1}{2}$ miles, and the water will be conveyed across three ravines through either steel or reinforced concrete pressure pipes.

At the end of the above section the distributing system will begin. (see accompanying map).

334 The dimensions of the distributing ditches will be as follows:

	Width on top Water	Width on bottom	Depth of water	Grade per mile	Length miles.
Distributing Ditch	Line feet	feet	feet.	feet.	
No. 1	32	20	4	2.112	7.
No. 2	14	8	2	5.28	6
No. 3, Sec. 1.	50	32	6	1.056	5.8
No. 3, Sec. 2.	25	16	3	3.168	13.1
No. 4	43	28	5	1.584	13.6

8. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any.

1. Earth, hardpan loose rock, solid rock. 2 [""] 11 tunnels. Total length 9485 ft. 3 No fluming three steel or concrete pressure pipes Total length 5820 ft.

9. The estimated cost of said enlargement is \$2,250,000.00.

10. The land to be irrigated has a total area of 55,955 acres in addition to the area described in Permit 2111, de-

scribed as follows: (Give estimated acreage in fractions of subdivisions)

(Here follows list of lands by fractional subdivisions situated in Tps. 52 and 53 N., R. 102 W.; Tps. 53, 54 and 55 N., R. 101 W., Tps. 53, 54 and 55, N., R. 100 W.; Tps. 55 and 56 N. R. 99 W: Tp. 55 N. R. 98 W. and Tp. 55 N., R. 97 W. of 6th P. M.)

335 11. Construction of the proposed enlargement or extension will begin within one year from date of approval of this application.

12. The time required for the completion of enlargement or extension is 5 years from April 30, 1905.

13. The time required to complete the application of water to the beneficial use stated in this application is 10 years from April 30, 1905.

14. A map in duplicate, prepared in accordance with the provisions of Section 35 of the Water Laws, accompanies this application.

Signed: JEREMIAH AHERN,
Engineer U. S. G. S.

Note:—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

Note:—Before applications for the enlargement of ditches can be approved, the written consent of the owners of such ditches must be secured, and this must accompany the application.

336 District of Columbia } ss.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by Jeremiah Ahern, this 7 day of April. 1904.

Seal

EDWIN S. CLARKSON,
Notary Public, D. C.

Notice of expiration mailed Oct. 16, 1909.

Time for completion of work under this permit is extended until such time as the proper secondary application for permit is filed or some agreement is reached whereby we are notified to cancel this permit.

CLARENCE T. JOHNSTON,
State Engineer
Jan. 3, 1910

The State of Wyoming, } ss.
State Engineer's Office. }

This Is To Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: Approved for all lands described except the tract included in the Cody & Salsbury [segregation] to the State of Wyoming and described in Permit No. 2111 lying on the South side of the Shoshone River.

Work will begin within one year from date of approval.

The time for completing construction shall terminate December 31, 1909.

The time for completing the appropriation of water for beneficial use shall terminate December 31, 1912.

The Amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31, 1912, and the additional volume applied to power, domestic, mechanical municipal and other beneficial purposes on or before that date.

Witness my hand this 14th day of April, A. D. 1904.

CLARENCE T. JOHNSTON,
State Engineer

337 Plaintiff's Exhibit 2 is a duly certified copy of Permit No. [10, 138,] in the name of the United States of America, taking water from the Shoshone River through the Garland Canal as the same appears of record in the office of the State Engineer of the State of Wyoming in Book 33 of Applications, on page 21, and filed for record January 6, 1910, the material parts thereof being the following:

338 Application for a Permit to Divert and Appropriately the Water of the State of Wyoming

Water Division No. 3

District No

I, H. N. Savage, Supervising Engineer, U. S. Reclamation Service thereunto duly authorized by the Secretary of the Interior of Helena, County of Lewis and Clark, State of Montana, being duly sworn according to law, upon my oath say:

1. The name of the applicant is the United States of America.

2. The postoffice address of the applicant is Helena, Montana.

3. The use to which the water is to be applied is for agricultural purposes and in connection therewith the development of water power, also domestic purposes.

4. The name of the ditch or canal is the "Garland Canal" to Frannie Canal outtake in Lot 60 T 55 NR 99 W. 6th P. M. Wyo. and Frannie Canal and Frannie extension.

5. The source of the proposed appropriation is the Shoshone River, supplemented by storage in Shoshone Reservoir.

6. The headgate of the proposed ditch or canal is located in the Northwest quarter of Section 7, Township 53, North, Range 100 West, 6th [Principle] Meridian, Wyoming.

339 7. The said ditch or canal is to be sixty-four (64) miles long and to pass through the following lands (give route by courses and distances, or by naming legal subdivisions crossed):

(Here follows detailed description by legal subdivisions of the lands through which the canal passes beginning at Sec. 7, Tp. 53 N., R. 100 W., and ending at Sec. 31, Tp. 57 N., R. 96 W., 6 P. M.

8. The dimensions of said works are: (a) (At headgate) Width on top (at water-line) 58.8 feet; width on bottom 20 feet; depth of water 9.7 feet; grade 0.8448 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgates:

(At Sta 590 Garland Canal) Width on top (at water line) 64.0 feet; width on bottom 40.0 feet; depth of water 6.0 feet; grade 1.3728 feet per mile.

(At Sta 0 Frannie Canal) Width on top (at water-line) 54.0 feet; width on bottom 36.0 feet; depth of water 4.5 feet; grade 1.9008 feet per mile.

(At Sta 570 Frannie Canal) Width on top (at water-line) 47.0 feet; width on bottom 29.0 feet; depth of water 4.5 feet; grade 1.9008 feet per mile.

9. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any. The first seventeen miles of the canal include one tunnel 17,355 feet long, and 2400 feet of flume. In the next forty-seven miles of canal, 1600 feet of tunnel is contemplated. The bulk of the material to be moved is sandy loam underlaid with gravel and some sandstone. The material in the forty-seven mile section will be largely sandy loam with some cuts through sandstone.

340 10. The estimated cost of said ditch is Two million, Four Hundred Thousand Dollars.

11. The land to be irrigated has a total area of 90,000 acres, described as follows: (give estimated acreage in fractions of subdivisions)

Secs. 17 to 20, 29 to 32, Tp. 58 N., R. 97 W.; Secs. 13, 14, 23, to 26, 34 to 36. Tp. 58 N., R. 98 W., Secs. 4 to 10, 13 to 24, 26 to 36 Tp. 57 N. R. 97 W.; Secs. 1 to 3, 10 to 14, 22 to 29, 32 to 36, Tp. 57 N. R. 98 W.; Secs. 6, 7, Tp. 56, N., R. 96 W.; Secs. 1 to 23, 28 to 33, Tp. 56 N. R. 97 W.; all of Tp. 56 N., R. 98 W.; Secs. 1 to 4, 8 to 36, Tp. 56 N., R. 99 W.; Secs. 25, 35, 36, Tp. 56 N., R. 100 W.; Secs. 5 to 8, 18, Tp. 55 N. R. 97 W.; Secs. 1 to 24, 28 to 32, Tp. 55 N., R. 98 W.; all of Tp. 55 N. R. 99 W.; Secs. 1, 2, 11 to 15, 22 to 27, 33 to 36, Tp. 55 N., R. 100 W., Secs. 2 to 5, 8 to 10, 15 to 17, 20, 21, Tp. 54 N., R. 100 W., 6th P. M.

341 12. Construction will begin on proposed works on or before , 191 .

13. The time required for the completion of ditches and other distributing works is ten years from date, 191 .

14. The time required to complete the application of water to the beneficial use stated in this application is five years from date 191 .

15. A map of the proposed ditch or canal, prepared in accordance with Chapter 14, R. S. 1899, accompanies this application.

Signed: H. N. SAVAGE,
Supervising Engineer.

Note: The statements in the foregoing application must conform with the requirements of Chapter 14, R. S. 1899.

The State of Montana }
County of Lewis and Clark [e] } ss.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by H. N. Savage this 27th day of December, 1909

JULIUS BARNEY
Notary Public for the State of Montana
Residing at Helena, Mont.

(Seal)

My Commission expires June 19, 1910

2 additional maps approved Oct. 30, 1912

342 Notice of expiration mailed Sept, 21-1915

Time for completion extended to Dec. 31-1920.

JAS. B. TRUE
State Engineer Dec. 21, 1915

Additional Map approved Dec. 24, 1915

The State of Wyoming, }
State Engineer's Office. } ss.

This Is to Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: Secondary Permit, See Primary Permit #751 Res. The land descriptions herein to be submitted in detail as progress may permit.

Construction of proposed work shall begin within one year from the date of approval.

The time for completing the work shall terminate on December 31, 1915.

The time for completing the appropriation of water for beneficial use shall terminate on December 31, 1920.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31, 1920, and the additional volume used for Stock and domestic purposes on or before said date.

Witness my hand this 11th day of October, A. D. 1910.

CLARENCE T. JOHNSTON,
State Engineer.

343 Plaintiff's Exhibit 3 is a duly certified copy of Permit No. 492 of Reservoirs, in the name of the Secretary of the Interior, taking water from Shoshone River through the Shoshone Reservoir, as the same appears of record in the office of the State Engineer of the State of Wyoming, in Book 3 of Reservoirs, on page 44, and filed for record March 5, 1904; the material parts thereof being the following:

344 Application for a Permit to Construct the Shoshone Reservoir and to Store the Unappropriated Water of the State of Wyoming

Water Division No. 3

District No. 9

I, Jeremiah Ahern, Engineer, U. S. Geological Survey, thereunto duly authorized by the Secretary of the Interior for and on behalf of the United States of America, under the provisions of the Act of Congress approved June 17, 1902 (32 Stat. 388), being duly sworn according to law, upon my oath say:

1. The name of the applicant Secretary of the Interior.
2. The postoffice address of the applicant Washington, D. C.

3. The name of stream from which reservoir is to be filled and appropriation made is Shoshone River.

4. The uses to which the water is to be applied are irrigation, the development of power for irrigation purposes, domestic purposes and other beneficial uses.

5. The location of the proposed reservoir will be in Secs. 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 23, 24, 25, 26, 27, T. 52 N., R. 103 W. and Sec. 7, T. 52 N., R. 102 W.

(a) State whether situated in channel of running stream, and give character of material at outlet:

In channel of stream, granite.

(b) If not in channel of running stream, state how it is to be filled. If through canal, give name and dimensions:

(c) The construction of dam, the material of which it is to be built and the method of protecting from waves are as follows: Rubble masonry.

6. The area of [resvoir] is 3365 acres, with maximum depth of 170 feet and approximate mean depth of water of 47.4 feet.

345 7. The dimensions of dam are: Length on top, 150 feet. Length on bottom, 65 feet. Width on top 10 feet. Width on bottom, 145 feet. Depth, 170 feet. Slope of front, Vertical Slope of back, 4/5 to 1. Height of dam above water line when full, ...feet.

8. The outlet and wasteway, with dimensions of each, are as follows: Outlet through tunnel 12 ft. wide 15 ft. high. No wasteway overflow dam.

9. The outlet of the [proposed] reservoir is located in the N. E. $\frac{1}{4}$ of the N. W. $\frac{1}{4}$ of Section 7, Township 52 North, Range 102 West.

10. The estimated cost of said reservoir is \$537500.

11. Construction will begin on proposed works on or before April 30, 1905.

12. The time required for the completion of the work is five years from April 30, 1905.

Signed: JEREMIAH AHERN

District of Columbia } ss.

I hereby certify that the foregoing application was signed in my presence and sworn to before me by Jeremiah Ahern this 27th day of February, 1904.

EDWIN S CLARKSON

Notary Public, D. C.

seal

Notice of expiration mailed Oct. 16, 1909

Note:—The statements in the foregoing application, together with the maps and plans, must comply with the requirements of Chapter 69, Session Laws 1903. No right to use water permanently can accrue until beneficial use has been made under an independent permit and proof thereof duly made. The water [wight] then becomes appurtenant to the lands irrigated or to the thing to which the water may be beneficially applied

346 The State of Wyoming, } ss.
State Engineer's Office.

This is to certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

The water to be stored in the reservoir herein described to be used on the lands described in the enlargement of permit 2111.

Construction of proposed works shall begin within one year from date of approval.

The time for completing the work shall terminate on December 31, 1909.

Witness my hand this 14th day of April, A. D. 1904.

CLARENCE T. JOHNSTON,
State Engineer

347 Plaintiff's Exhibit 4 is a duly certified copy of Permit No. 751 of Reservoirs, in the name of the Secretary of the Interior, taking water from the Shoshone River throughout the enlarged Shoshone Reservoir, as the same appears of record in the office of the State Engineer of the State of

Wyoming, in Book 3 of Reservoirs, on page 153 and filed for record September 7, 1905; the material parts thereof being the following:

348 Application for a Permit to Enlarge the Shoshone Reservoir, and to Store the Unappropriated Water of the State of Wyoming.

Water Division No. 3

District No. 2

I, Jeremiah Ahern, Engineer, U. S. Geological Survey, thereunto duly authorized by the Secretary of the Interior, for and on behalf of the United States of America, under the provisions of the Act of Congress, approved June 17, 1902, (32 Stat. 388), being duly sworn according to law, upon my oath say:

1. The name of the applicant is Secretary of the Interior.
2. The postoffice address of the applicant is Washington, D. C.

3. The name of the stream from which the reservoir is to be filled and appropriation made is Shoshone River.

4. The use to which the water is to be applied are irrigation, the development of power for irrigation purposes, domestic purposes and other beneficial uses.

5. The location of the proposed reservoir will be in Secs. 7, 18, 19 and 20, T. 52 N., R. 102 W. Secs. 7 to 18 inclusive, 23, 24, 25, 26, 27, and 34, T. 52 N., R. 103 W. Secs. 12 and 13, T. 52 N., R. 104 W., described as follows:

(a) State whether situated in channel of running stream, and give character of material at outlet: In channel of stream, granite.

(b) If not in channel of running stream, state how it is to be filled. If through canal, give name and dimensions.

(c) The construction of dam, the material of which it
349 is to be built and the method of protecting from waves are as follows: Masonry.

6. The area of reservoir is 6675 acres, with maximum depth of 240 feet and approximate mean depth of water of 68.4 feet.

7. The dimensions of dam are: Length on top 200 feet. Length on bottom, 70 feet. Width on top, 10 feet. Width on bottom, 108 feet. Depth, 310 feet. Slope of front, 25%.

Slope of back 15%. Height of dam above water line when full, 10 feet.

8. The outlet and wasteway, with dimensions of each, are as follows: Outlet through tunnels, first one to be constructed will be 10 ft. by 10 ft. dimensions of others not determined. Wasteway will be 300 ft. in [length], waste tunnel will be 20 ft. by 20 ft. on a 10% grade.

9. The outlet of the proposed reservoir is located in the NW $\frac{1}{4}$ of Section 7, Township 52 North, Range 102 West.

10. The estimated cost of said reservoir is \$1,096,200. (excluding right of way).

11. Construction will begin on proposed works on or before December 1, 1905.

12. The time required for the completion of the work is 2 $\frac{1}{2}$ [year] from December 1, 1905.

Signed: JEREMIAH AHERN

The State [fo] Wyoming }
County of Big Horn } ss.

I hereby certify that the foregoing application was signed in my presence and sworn to before me by Jeremiah Ahern this fourth day of September, 1905.

DAISY S. BECH,
Notary Public.

Seal

My commission expires Aug. 4, 1906

350 Notice of expiration mailed Oct. 13, 1908

Time for completion extended to Dec. 31, 1911.

CLARENCE T. JOHNSTON, State Engineer
Dec. 19, 1908

Notice of completion received Sept. 17, 1910.

Note: The statements in the foregoing application, together with the maps and plans, must comply with the requirements of Chapter 69, Session Laws 1903. No right to use water permanently can accrue until beneficial use has been made under an independent permit and proof thereof duly made. The water right then becomes appurtenant to the lands irrigated or to the thing to which the water may be beneficially applied.

The State of Wyoming, }
 State Engineer's Office } ss.

This is to certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: The records of the State Engineer's Office show the waters of Shoshone River to be largely appropriated. The appropriator under the permit is hereby notified of this fact and the issuance of this permit grants only the right to divert and use the surplus or waste water of the stream and confers no rights which will interfere with or impair the use of water by prior appropriators.

Construction of proposed works shall begin within one year from date of approval.

The time for completing the work shall terminate on December 31, 1908.

Witness my hand this 24th day of November, A. D. 1905.

CLARENCE T. JOHNSTON, State Engineer

351 Plaintiff's Exhibit 5, is a duly certified copy of Permit No. 1191 of Enlargements, in the name of Wilwood Irrigation Company, taking water from Shoshone River through an enlargement of the _____ ditch, as the same appears of record in the office of the State Engineer of the State of Wyoming, in Book 5 of Enlargements, on page 199, and filed for record April 12, 1904, the material parts thereof being the following:

352 Application for a Permit to Divert and Appropriate the Water of the State
 of Wyoming

Water Division No. 3

District No

Enlargement of the area irrigated on the South side Shoshone River under Permit No. 2111.

I, Byron Sessions of Byron County of Big Horn, State of Wyoming, being duly sworn according to law, upon my oath say:

1. The location and description of the ditch to be enlarged is as follows:

2. The head-gate is situated S 25° 32' W. 3333 ft. thence 350° 38' W 800 ft. from SW Corner of Section 3, Township 54 N., Range 100 W.

3. Said Ditch is 33 miles long and passes through the following lands (Give legal subdivisions) the same being correctly shown on the map accompanying this application: see accompanying map.

4. The dimensions of said ditch are: Width on top (at water-line) 32 feet; width on bottom 24 feet; depth of water 4 feet; grade 2 feet per mile.

5. Said ditch now serves to irrigate the following described land:

See lands under Permit 2111 south side Shoshone River. Also lands in Oregon Basin, [segregation] lying under canal. Lands cannot be accurately described owing to conflict in government surveys along river.

6. The total area now irrigated from said ditch being about 14,000 acres.

7. Application is hereby made for permission to enlarge or extend the use of water through the above named and described ditch and to divert and appropriate the 353 water of the State as follows:

1. The name of the applicant The Wilwood Irrigation Co.

2. The postoffice address of the applicant is Byron, Wyoming.

3. The use to which the water is to be applied is irrigation and domestic.

4. The name of the ditch or canal is The Wilwood Canal.

*5. The source of the proposed appropriation is The Shoshone River and the head of the proposed extension is located as in Paragraph 2.

* If the proposed work is to be an extension of the original ditch, give the location of the head of the extension by courses and distances from the nearest Government corner.

6. The said ditch or canal as enlarged is to be 33 miles long and to pass through the following lands (give sections, townships and ranges): See accompanying map.

7. The dimensions of said ditch are to be: (a) (At head-gate) Width on top (at water-line) 32 feet; width on bottom 24 feet; depth of water 4 feet; grade 2 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At 10 miles) Width on top (at water-line) 18 feet; width on bottom 24 feet; depth of water 3 feet; grade 2.4 feet per mile.

(At 20 miles) Width on top (at water-line) 15 feet; width on bottom 21 feet; depth of water 3 feet; grade 2.5 feet per mile.

8. Describe the character of proposed works, stating
354 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any.

Earth: Loose and solid rock. 3000 ft. tunnels: from 500 ft. to 2 miles.

9. The estimated cost of said enlargement is \$250,000.00.

10. The land to be irrigated has a total area of _____ acres, described as follows: (Give estimated acreage in fractions of subdivision)

(Here follows list of fractional [sybdivisions] of lands in Tps. 54 and 55 N., R. 100 W.; Tps. 54 and 55 N., R. 98 W. and Tps. 54 and 55 N., R. 97 W., 6th P. M., amounting to about 16,000 acres.)

11. Construction of the proposed enlargement or extension will begin within one year from date of approval of this application.

12. The time required for the completion of enlargement or extension is five years from December 31, 1904.

13. The time required to complete the application of water to the beneficial use stated in this application is 6 years from December 31st, 1904.

14. A map in duplicate, prepared in accordance with the provisions of Section 35 of the Water Laws, accompanies this application.

Signed: BYRON SESSIONS.

Note:—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

Note.—Before applications for the enlargement of ditches can be approved, the written consent of the owners of such ditches must be secured, and this must accompany the application.

355 The State of Wyoming, } ss.
 County of Laramie. }

I hereby certify that the foregoing application was signed in my presence and sworn to before me by Byron Sessions, this 7th day of April 1904.

F. B. SHELDON, Notary Public.

(Seal)

My commission expires Nov. 7, 1907.

Notice of expiration mailed Oct. 16, 1909.

Time for completion of work under this permit is extended until such time as the proper secondary application for permit is filed or some agreement is reached whereby we are notified to cancel this permit.

CLARENCE T. JOHNSTON,
[Steate] Engineer, Jan 3, 1910

See assignment recorded on p. 38, book 3 of Misc. Records

The State of Wyoming, } ss.
State Engineer's Office. }

This Is to Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

Work will begin within one year from date of approval.

The time for completing construction shall terminate December 31, 1909.

The time for completing the appropriation of water for beneficial use shall terminate December 31, 1910.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31, 1910, and the additional volume applied to domestic purposes on or before that date.

Witness my hand this 18th day of April, A. D. 1904.

CLARENCE T. JOHNSTON,
State Engineer.

357 Plaintiff's Exhibit 6 is a duly certified copy of an assignment by the Big Horn Basin Colonization Company to the United States as follows:

358 This Assignment, Made this 20th day of May, in the year of our Lord one thousand nine hundred and Five, between the Big Horn Basin Colonization Company, a Corporation duly organized and existing under and by virtue of the laws of the State of Wyoming, party of the first part, and the United States of America, party of the second part.

Witnesseth, That the party of the first part, for and in consideration of the sum of One Dollar (\$1.00) and other valuable consideration to it in hand paid by the said party of the second part, receipt whereof [if] hereby confessed and acknowledged, does hereby bargain, sell, convey, assign, transfer and set over unto the party of the second part all right, title and interest that it has to the use of the waters of the State of Wyoming in, under and by virtue of two certain water permits heretofore issued and granted to the party of the first part by the State of Wyoming by and through the office of its State Engineer, bearing numbers 1191 and 5329 respectively, being permits for the use of water through what is known as the Whistle Creek Canal and the Wilwood Canal, respectively.

To have and to hold the same unto the party of the second part, together with all and singular the appurtenances and privileges thereunto belonging, or in any wise thereunto appertaining, and all the right, title, interest and claims whatsoever of the party of the first part, either in law or in

equity, under and by virtue of said permits, to the only proper use and benefit of the said party of the second part.

In Witness Whereof the party of the first part does cause its name to be subscribed hereto by its president, and attested by its secretary, and its seal to be hereunto affixed.

BIG HORN BASIN COLONIZATION COMPANY

By

BYRON SESSIONS

Its President

Attest: **DAVID LEWIS**

Its Secretary

In Presence of

W. E. GODFREY

JOS. H. NEVILLE

Seal

359 Approved, **T. F. BURKE**,

The State of Wyoming, } ss.
State Engineer's Office }

This instrument was filed for record at 10:30 A. M., on the 24th day of February, and duly recorded in Book 3 of Miscellaneous Records, on page 38.

Fee \$1.45

CLARENCE T. JOHNSTON

State Engineer

360 Plaintiff's Exhibit 7 is a duly certified copy of Permit No. 5329, in the name of Big Horn Colonization Company, taking water from Shoshone River, through the Whistle Creek Ditch, as the same appears of record in the office of the State Engineer of the State of Wyoming in Book 17 of Applications, on page 262, filed for record February 21, 1903; the material parts thereof being the following:

361 Application for a Permit to Divert and Appropriate the Water of the State of Wyoming

Water Division No. 3

District No

I, The Big Horn Basin Colonization Co. A. O. Woodruff, Pres. of Salt Lake City, County of Salt Lake, State of Utah, being duly sworn according to law, upon my oath say:

1. The name of the applicant The Big Horn Colonization Co. A. O. Woodruff, Pres.
2. The postoffice address of the applicant Salt Lake City, Utah.
3. The use to which the water is to be applied is the irrigation of farm lands.
4. The name of the ditch or canal is The Whistle Creek Canal.
5. The source of the proposed appropriation is The Shoshone River, Big Horn Co. Wyo.
6. The headgate of the proposed ditch or canal is located South 22° East 4840 feet from N.W. Corner of Section 3, Township 54 N., Range 100 W.
7. The said ditch or canal is to be about thirty (30) miles long and to pass through the following lands (give route by courses and distances, or by naming legal subdivisions crossed): Secs. 1-2-3 twp. 54 NR 100 West. Sec 36 Tp. 55 R 100 W. Sec. 31 Tp. 55 NR 99 W. Secs. 4-5-6-9-10-11-2-1-12 Tp. 54 R 99 W. Secs 3-4-5-6-9-10-11-12 Twp. 54 NR 98 W; Secs. 7, 18, 5, Twp. 54 NR 97 W; Secs. 8, 17, 20, 29, 32, Twp 55 NR 97 W.
8. The dimensions of said works are (a) (At headgate) Width on top (at water-line) about 30 feet; width on bottom about 20 feet; depth of water 4 feet; grade about 4 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At.....) Width on top (at water line)..... feet; width on bottom feet; depth of water feet; grade feet per mile.

(At.....) Width on top (at water line[])..... feet; width on bottom feet; depth of water feet; grade feet per mile.

9. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd Number and length of tunnels, if any. 3rd Amount of fluming, if any.

The greater amount of earth to be moved is gravelly soil, but there is some clay and rock to be moved. No tunnels—some fluming.

10. The estimated cost of said ditch is \$100,000.

11. The land to be irrigated has a total area of 23,549 acres, described as follows: (Give estimated acreage in fractions of subdivisions[]):

(Here follows list in fractional subdivisions of lands in Tps. 54 and 55 N., R. 100 W., Tp. 54 N., R. 99 W.; Tps. 54 and 55 N. R. 98 W.; Tps. 54 and 55 N., R. 97 W.)

12. Construction will begin on proposed works on or before 19....

13. The time required for the completion of ditches and other distributing work is.....year from 19....

14. The time required to complete the application of water to the beneficial use stated in this application is.....year.....from.....19....

15. A map of the proposed ditch or canal, prepared in accordance with Chapter 14, R. S. 1899, accompanies this application.

363 Signed: BIG HORN BASIN COLONIZATION CO.
By A. O. WOODRUFF,
Pres

Note:—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

The State of Wyoming, }
County of Laramie. } ss.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by A. O. Woodruff this 21st day of February 1903.

ROBT. P. FULLER
Notary Public

Seal

Notice of expiration mailed November 28, 1906

See assignment recorded page 38 Book 3 Misc. Records

The State of Wyoming, } ss.
State Engineer's Office. }

This Is to Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

Construction of proposed work shall begin within one year from the date of approval.

The time for completing the work shall terminate on December 31, 1906.

364 The time for completing the appropriation of water for beneficial use shall terminate on December 31, 1907.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31, 1907, and the additional volume used for.....purposes on or before said date.

Witness my hand this 24th day of February A. D. 1903.

FRED BOND,
State Engineer.

365 Plaintiff's Exhibit 8-A is a small official map of the Shoshone Project, Wyoming, printed by the United States Reclamation Service and part of the official files of the United States Reclamation Service, Department of the Interior.

Plaintiff's Exhibit 8A

WATER SUPPLY

SOURCE OF WATER SUPPLY: SHOSHONE RIVER. AREA DRAINAGE BASIN: 1,380 SQUARE MILES. ANNUAL RUN-OFF IN ACRE-FEET OF SHOSHONE RIVER NEAR CODY 1903 TO 1914-MAXIMUM, 1,420, 000; MINIMUM, 918,450; AVERAGE 1,151,700

SHOSHONE RESERVOIR

AREA 6,600 ACRES; CAPACITY, 456,000 ACRE- FEET AT ELEVATION OF SPILLWAY CREST; LENGTH OF SPILLWAY, 300 FEET, ELEVATION OF SPILLWAY, 233 FEET ABOVE STREAM BED.

SHOSHONE STORAGE DAM

TYPE, RUBBLE CONCRETE ARCH; MAXIMUM HEIGHT, 328 FEET; LENGTH OF CREST, 200 FEET; VOLUME, 75,576 CUBIC YARDS.

CORBETT DIVERSION DAM

TYPE, REINFORCED CONCRETE WEIR; MAXIMUM HEIGHT, 18 FEET; LENGTH OF MASONRY, 400 FEET; LENGTH OF EARTH FILL, 435 FEET; VOLUME OF CONCRETE, 4,951 CUBIC YARDS, EARTH, 5,200 CUBIC YARDS

CANALS (CONSTRUCTED)

11 MILES WITH CAPACITIES GREATER THAN 800 SECOND- FEET, 14 MILES WITH CAPACITIES FROM 301 TO 800 SECOND- FEET, 27 MILES WITH CAPACITIES FROM 50 TO 300 SECOND- FEET, 211 MILES WITH CAPACITIES LESS THAN 50 SECOND- FEET.

TUNNELS (CONSTRUCTED)

ELEVEN; AGGREGATE LENGTH, 19,249 FEET

IRRIGABLE AREA

ENTIRE PROJECT, 148,118 ACRES; FIRST UNIT, 15,192 ACRES; SECOND UNIT, 15,132 ACRES; THIRD UNIT, 2,927 ACRES; FOURTH UNIT, 6,206 ACRES; FIFTH UNIT, 3,562 ACRES; SUBSEQUENT UNITS, 105,100 ACRES.

AGRICULTURAL AND CLIMATIC CONDITIONS

LENGTH OF IRRIGATING SEASON: FROM APRIL 20 TO OCTOBER 20-180 DAYS. AVERAGE ELEVATION OF IRRIGABLE AREA: 4,500 FEET ABOVE SEA LEVEL. AVERAGE ANNUAL RAINFALL ON IRRIGABLE AREA: 1907 TO 1913, 5.53 INCHES. RANGE OF TEMPERATURE ON IRRIGABLE AREA: -31° TO 101° F. CHARACTER OF SOIL OF IRRIGABLE AREA: LIGHT SANDY AND CLAY LOAMS. PRINCIPAL PRODUCTS: ALFALFA, GRAIN, SUGAR BEETS, CATTLE AND HOGS.

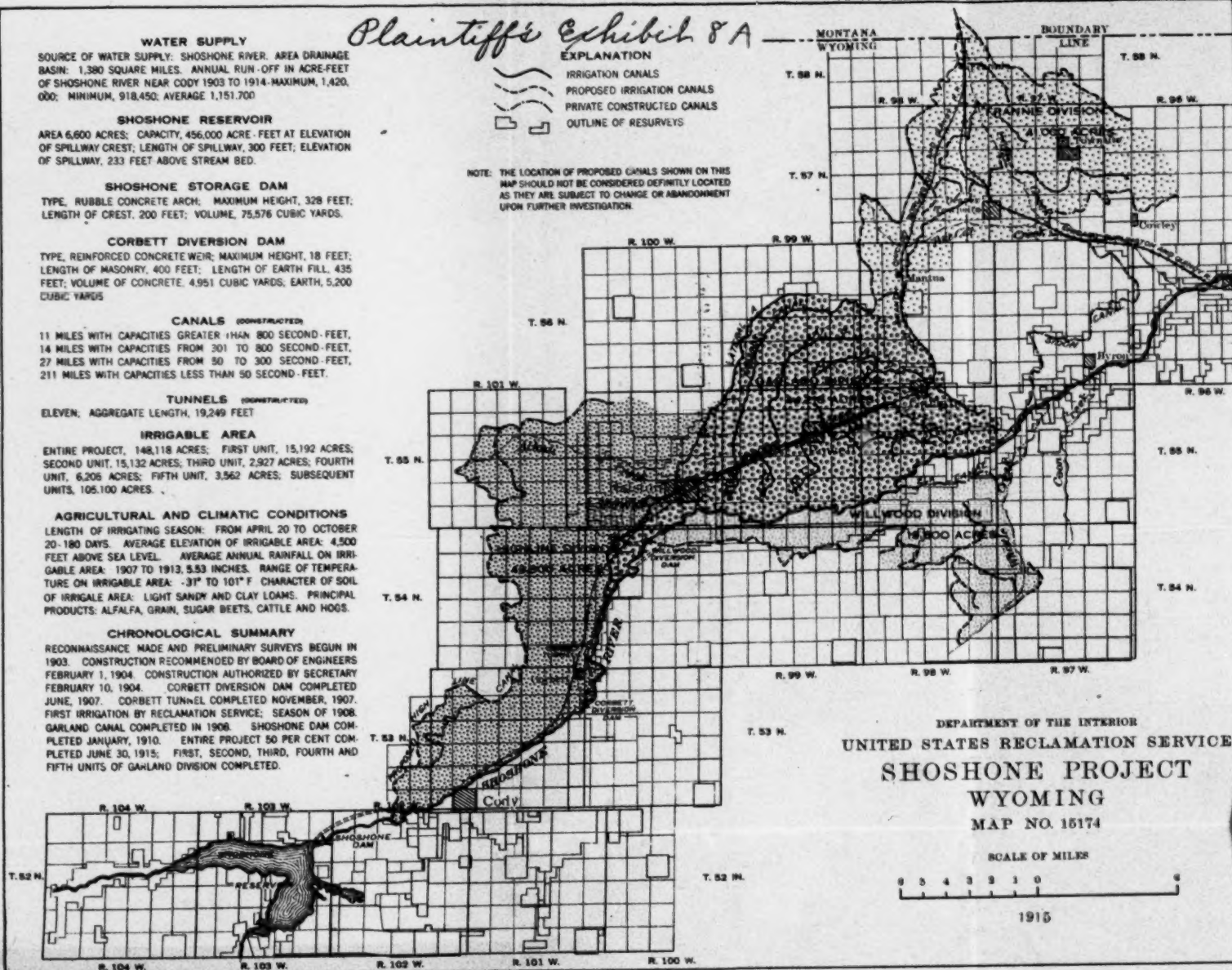
CHRONOLOGICAL SUMMARY

RECONNAISSANCE MADE AND PRELIMINARY SURVEYS BEGUN IN 1903. CONSTRUCTION RECOMMENDED BY BOARD OF ENGINEERS FEBRUARY 1, 1904. CONSTRUCTION AUTHORIZED BY SECRETARY FEBRUARY 10, 1904. CORBETT DIVERSION DAM COMPLETED JUNE, 1907. CORBETT TUNNEL COMPLETED NOVEMBER, 1907. FIRST IRRIGATION BY RECLAMATION SERVICE: SEASON OF 1908. GARLAND CANAL COMPLETED IN 1908. SHOSHONE DAM COMPLETED JANUARY, 1910. ENTIRE PROJECT 50 PER CENT COMPLETED JUNE 30, 1915. FIRST, SECOND, THIRD, FOURTH AND FIFTH UNITS OF GARLAND DIVISION COMPLETED.

EXPLANATION

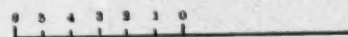
- IRRIGATION CANALS
- PROPOSED IRRIGATION CANALS
- PRIVATE CONSTRUCTED CANALS
- OUTLINE OF RESURVEYS

NOTE: THE LOCATION OF PROPOSED CANALS SHOWN ON THIS MAP SHOULD NOT BE CONSIDERED DEFINITELY LOCATED AS THEY ARE SUBJECT TO CHANGE OR ABANDONMENT UPON FURTHER INVESTIGATION.



DEPARTMENT OF THE INTERIOR
UNITED STATES RECLAMATION SERVICE
SHOSHONE PROJECT
WYOMING
MAP NO. 15174

SCALE OF MILES



1915

367 Plaintiff's Exhibit 8 is the original application for a Permit from the State Engineer of the State of Wyoming in the name of the United States, taking water from Bitter Creek, through Lateral "D" Canal, filed with the State Engineer December 31, 1910, and returned by him without approval on August 5, 1912; the material parts thereof being as follows:

368 Application for a Permit to Divert and appropriate the Water of the State of Wyoming.

Water Division No.

District No.

I, H. N. Savage, Supervising Engineer, United States Reclamation Service duly authorized by the Secretary of the Interior of Helena, County of Lewis & Clark, State of Montana, being duly sworn according to law, upon my oath say:

1. The name of the applicant is the United States of America.

2. The postoffice address of the applicant Helena, Montana.

3. The use to which the water is to be applied is for agricultural purposes.

4. The name of the ditch or canal is Lateral "D".

5. The source of the proposed appropriation is Bitter Creek.

6. The headgate of the proposed ditch or canal is located N. 50°20'E., 1564.0' from the SW corner of Lot 41 in SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot 41, T. 56 N., R. 99 W., 6th P. M.

7. The said ditch or canal is to be seven and eight tenths (7.8) miles long and to pass through the following lands (give route by courses and distances, or by naming legal subdivisions crossed): Beginning at Headgates No. 3, thence in a north-easterly direction crossing east boundary of Lot 41 2453.5 feet from its northeast corner; thence in an easterly direction it crosses the east boundary of Lot 40, 2888.1 ft. from its southeast corner; thence in a southeasterly direction crossing the east boundary of Lot 39, 942.7 ft. from the north boundary of Garland townsite; thence southeasterly crossing the south boundary of Lot 38, 1896.6 ft. from its southeast corner; thence southeasterly crossing east boundary of Lot 55, 2066.9 feet from its north-

east corner; thence southeasterly crossing south boundary of lot 44, 1419.1 ft, from its southeast corner; thence southeasterly crossing east boundary of Lot 45, 1405.4 ft, from its northeast corner; thence easterly crossing boundary of Lot 42, 2994.9 feet from its southeast corner; thence easterly to the end as shown in accompanying map.

8. The dimensions of said works are: (a) (At headgate) Width on top (at water-line) 11.9 feet; width on bottom 5.00 feet; depth of water 2.3 feet; grade 6.34 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At 1.5 miles) Width on top (at water-line) 10.4 feet; width on bottom 5.00 feet; depth of water 1.8 feet; grade 7.92 feet per mile.

(At 3.6 miles) Width on top (at water-line) 8.5 feet; width on bottom 4.00 feet; depth of water 1.5 feet; grade 7.92 feet per mile.

(At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

9. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. number and length of tunnels, if any. 3rd. Amount of fluming, if any.

The bulk of the material to be moved is sandy loam underlaid with gravel.

10. The estimated cost of said ditch is Two Thousand (\$2,000.00) Dollars.

11. The land to be irrigated has a total area of 3040 acres, described as follows: (Give estimated acreage in fractions of subdivisions)

370 T. 56 N., R. 98 W., 6th PM Lot 40, S $\frac{1}{2}$; Lot 39, all; Lot 38, S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$; all Lot 56. T. 55 N., R. 98 W., 6th P. M.—Lot 65, E $\frac{1}{2}$ NE $\frac{1}{4}$; Lot 64, N $\frac{1}{2}$; all Lot 56; all Lot 57 north of railroad; Lot 55, NW $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$; Lot 44, SW $\frac{1}{4}$ and SW $\frac{1}{4}$ SE $\frac{1}{4}$; Lot 45, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$; Lot 42, SW $\frac{1}{4}$ NW $\frac{1}{4}$ and S $\frac{1}{2}$.

12. Construction will begin on proposed works on or before December 17, 1912.

13. The time required for the completion of ditches and other distributing work is five years from December 17, 1912.

14. The time required to complete the application of water to the beneficial use stated in this application is ten years from December 17, 1912.

15. A map of the proposed ditch or canal, prepared in accordance with Chapter 14, R. S. 1899, accompanies this application.

Signed: H. N. SAVAGE,
Supervising Engineer, U. S. R. S.

Note:—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

The State of Montana, }
County of Lewis & Clark. } ss.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by H. N. Savage this 20th day of December 1910.

Seal JULIUS BARNEY,
Notary Public for the State of Montana,
Residing at Helena, Mont.

My commission expires June 10, 1913

The State of Wyoming, }
State Engineer's Office. } ss.

This Is to Certify that I have examined the foregoing application and have returned the same without my approval for the following reasons: Land already covered by
371 Permit #10138 which has been issued to the United States Reclamation Service in connection with the Shoshone project.

Witness my hand this 5th day of August A. D. 1912
A J PARSHALL, State Engineer

United States of America

Engineer's Form No. 1

86/74

No.

Application for a Permit to Divert and Appropriate the
Water of the State of Wyoming. Division No. 3
District No.

The State of Wyoming, }
State Engineer's Office. } ss.

This instrument was received and filed for record on the
31st day of December A. D. 1910 at 9 o'clock A. M., and duly
recorded in Book of Applications on page—.

State Engineer

Fee \$2.00 pd. Maps filed.

372 Plaintiff's Exhibit 9 is the original application for a
permit from the State Engineer of the State of Wy-
oming in the name of the United States, taking water from
Bitter Creek, through Lateral "C" canal, filed with the State
Engineer December 31, 1910, and returned by him without
approval on August 5, 1912, the material parts thereof being
the following:

373 Application for a Permit to Divert and Approp-
riate the Water of the State of Wyoming.

Water Division No..

District No..

I, H. N. Savage, Supervising Engineer, U. S. Reclamation
Service, duly authorized by the Secretary of the Interior of
Helena, County of Lewis and Clark, State of Montana, being
duly sworn according to law, upon my oath say:

1. The name of the applicant United States of America.
2. The postoffice address of the applicant Helena, Montana.
3. The use to which the water is to be applied is for agri-
cultural purposes.

4. The name of the ditch or canal is Lateral "C"

5. The source of the proposed appropriation is Bitter
Creek.

6. The headgate of the proposed ditch or canal is located from the NW Cor. Lot 81, T. 55 N. R. 99 W., 6th P. M., S. 68°53'E., 1420.9 feet to headgate in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Lot 81, Township 55 North, Range 99 West.

7. The said ditch or canal is to be three and nine-tenths (3.9) miles long and to pass through the following lands (give route by courses and distances, or by naming legal subdivisions crossed): Beginning at Headgates No. 1; thence northwesterly crossing the south boundary of Lot 38, 1125.1 feet from its southwest corner; thence northeasterly crossing the east boundary of Lot 38, 362.5 feet from its northeast corner; thence northeasterly crossing the north boundary of Lot 37, 971.8 feet from its northwest corner; thence northeasterly crossing the east boundary of Lot 34, 897.5 feet from its southeast corner; thence easterly crossing the east boundary of Lot 43, 242.0 feet from its southeast corner; thence southeasterly crossing north boundary of Lot 40, 408.2 feet from its northwest corner and thence southeasterly to end of line.

8. The dimensions of said works are: (a) (At headgate) Width on top (at water-line) 10.4 feet; width on bottom 5.00 feet; depth of water 1.8 feet; grade 7.92 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At 0.7) Width on top (at water-line) 8.5 feet; width on bottom 4.00 feet; depth of water 1.5 feet; grade 7.92 feet per mile.

(at—) Width on top (at water-line)—feet; width on bottom—feet; depth of water—feet; grade—feet per mile.

(At—) Width on top (at water-line)—feet[1] width on bottom—feet; depth of water—feet; grade—feet per mile.

9. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any.

The bulk of the material to be moved is sandy loam underlaid with gravel.

10. The estimated cost of said ditch is One Thousand (\$1,000.00) Dollars.

11. The land to be irrigated has a total area of 2040 acres, described as follows: (Give estimated acreage in fractions of subdivisions)

T. 55 N., R. 99 W.— Lot 38, NE $\frac{1}{4}$, SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$; All Lots 37 and 41; Lot 44, S $\frac{1}{2}$ SE $\frac{1}{4}$; Lot 43, S $\frac{1}{2}$ SW $\frac{1}{4}$; Lot 40 S $\frac{1}{2}$ N $\frac{1}{2}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$.

12. Construction will begin on proposed works on or before December 17, 1912.

375 13. The time required for the completion of ditches and other distributing work is five years from December 17, 1912.

14. The time required to complete the application of water to the beneficial use stated in this application is ten years from December 17, 1912.

15. A map of the proposed ditch or canal, prepared in accordance with Chapter 14, R. S. 1899, accompanies this application.

Signed: H. N. SAVAGE,
Supervising Engineer, USRS

Note: The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

The State of Montana, }
County of Lewis & Clark. } ss.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by H. N. Savage this 20th day of December 1910.

Seal

JULIUS BARNEY,
Notary Public For the State of Montana,
Residing at Helena, Mont

My commission expires
June 10, 1913

The State of Wyoming, }
State Engineer's Office. } ss.

This Is to Certify that I have examined the foregoing application and have returned the same without my approval for the following reasons: Land already covered by Permit #10138 which has been issued to the United States Reclamation Service in connection with the Shoshone project.

Witness my hand this 5th day of August A. D. 1912.

A. J. PARSHALL, State Engineer

United States of America

376 Engineer's Form No. 1

85/74

No....

Application for a Permit to Divert and Appropriate the
Water of the State of Wyoming.

Division No. 3

District No—

The State of Wyoming, }
State Engineer's Office } ss.

This instrument was received and filed for record on the
31st day of December, A. D. 1910, at 9 o'clock A.M. and duly
recorded in Book—of Applications, on page—

State Engineer.

Fee \$2.00 pd Maps filed

377 Plaintiff's Exhibit 10 consists of sixteen large blue
prints of maps duly certified to by the State Engineer
of the State of Wyoming on January 25, 1919, as being true
blue print copies of the maps on file in his office in connec-
tion with plaintiff's Permits 5329, 10138, 492 Res., 751 Res.,
1189 Enlg., and 1191 Enlg., and in connection with defend-
ants' Permits 10162, 10163, 11346, 13145, 3173 Enlg., and
3174 Enlg. The plaintiff offers in evidence the maps filed in
connection with plaintiff's permits above mentioned, as
showing compliance with the laws of Wyoming and the regu-
lations of the State Engineer relating to maps to be filed
with applications for permits; and the maps filed in con-
nection with defendants' permits above mentioned may also
be considered as offered in evidence by defendants as show-
ing compliance with the laws of Wyoming and the regula-
tions of the State Engineer relating to maps to be filed with
applications for permits. (All of said maps will be available
for examination at the oral argument.)

378 Plaintiff's Exhibit 11 is a duly certified copy of the
Patent of the State of Wyoming, No. 407, to Christo-
pher Althoff, as the same appears on the records of the Com-

missioner of Public Lands of the State of Wyoming, containing reservations for rights of way, and is as follows:

379 Certificate of Purchase
No. 257

Patent
No. 407

The State of Wyoming

To All to Whom These Presents Shall Come—Greeting:

Whereas, There has been deposited by Christopher Althoff in the office of the State Board of School Land Commissioners, of the State of Wyoming, Certificate of Purchase of State Lands No. 257 heretofore issued by the said Board of School Land Commissioners, June 8, 1910 to the said Christopher Althoff; and, Whereas, It appears by the records of said Board of School Land Commissioners that all conditions have been fulfilled and full payment has been made by said Christopher Althoff, according to the provisions of the Act of the Legislature of the State of Wyoming, entitled, "An Act concerning public lands of the State of Wyoming, providing for the selection, care, leasing and control of the same, and designating and defining the duties of officers in the selection, management and control of such lands," approved January 10, 1891, and the Acts amendatory and supplemental thereto, for the Northwest quarter (NW $\frac{1}{4}$) and East half of Southwest quarter (E $\frac{1}{2}$ SW $\frac{1}{4}$) of original Section Thirty-six (36), Township Fifty-six (56) North, Range Ninety-nine (99) West, described by the resurvey as Lots C. D, and F of Lot Thirty-seven (37), Township Fifty-six (56) North, Range Ninety-nine (99) West of the Sixth Principal Meridian, containing Two Hundred Forty (240) acres, more or less according to the official plat of the survey of said lands returned to the United States General Land Office by the Surveyor General, which said tract has been purchased by the said Christopher Althoff for the sum of

Five Thousand Seven Hundred Twenty-Eight Dollars.

380 Now Know Ye, That the State of Wyoming, in consideration of the premises and in conformity with the statutes in such case made and provided, has given and granted, and by these presents does give and grant, unto the said Christopher Althoff and to his heirs, the said tract above described.

To have and to hold the same, together with all rights, privileges, immunities and appurtenances of whatever nature thereunto belonging, unto the said Christopher Althoff and to his heirs and assigns forever, subject to all legally estab-

lished or granted rights of way under the laws of the State of Wyoming or reserved to the United States and subject to any vested and accrued rights of any ditch company, or any person, owning any ditch or ditches on, or passing through, any part of said lands and subject to the right of the proprietor of any vein or lode to extract and remove his ore therefrom, should the same be found to penetrate or intersect the premises hereby granted, as provided by law.

In Testimony Whereof, I, Frank L. Houx, Acting Governor of the State of Wyoming, have caused these Letters to be made Patent, and the Seal of the State Board of School Land Commissioners to be hereunto affixed.

Given under my hand at the City of Cheyenne, the thirtieth day of July in the year of Our Lord One Thousand Nine Hundred and [Seventeenth].

FRANK L. HOUX,

Seal

Acting Governor

Countersigned:

RAY E. LEE

Commissioner of Public Lands

Recorded at Page 120 of Book 2 of Patents

Examined W. S. G. U.

381 Plaintiff's Exhibit 12 is a duly certified copy of the State's patent to Charles G. Caldwell, and is the same as plaintiff's exhibit 11, except that this patent is dated June 11, 1918, and numbered 446, the certificate of purchase No. 301 was issued March 17, 1911 to C. E. Wetmore and Hiram E. Bull and assigned by them to Charles G. Caldwell on May 1, 1915, and the lands patented are S $\frac{1}{2}$ SW $\frac{1}{4}$, Sec. 36, Tp. 56 N. R. 99 W., 6th P. M. and resurveyed as S $\frac{1}{2}$ of lots G and H of Lot 37, Tp. 56 N., R. 99 W., 6th P. M., containing 80 acres more or less. This patent contains the same reservations for rights of way as found in plaintiff's exhibit 11.

Plaintiff's Exhibit 13 is a duly certified copy of the State's patent to Daniel H. Bagley, and is the same as plaintiff's exhibit 11, except that this patent is dated June 11, 1918 and numbered 449, the certificate of purchase No. 301 was

issued March 17, 1911, to C. E. Wetmore, and Hiram E. Bull, and assigned by them to Daniel H. Bagley, on May 1, 1915, and the lands patented are $N\frac{1}{2}$ NW $\frac{1}{4}$, Sec. 36, Tp. 56 N., R. 99 W., 6th P. M. and resurveyed as $N\frac{1}{2}$ of lots A and B of Lot 37, Tp. 56 N., R. 99 W., 6th P. M., containing 80 acres more or less. This patent contains the same reservations for rights of way as found in plaintiff's exhibit 11.

Plaintiff's Exhibit 14, is a duly certified copy of the State's patent to Agnes H. Caldwell and is the same as plaintiff's exhibit 11, except that this patent is dated August 16, 1918, and numbered 452, the certificate of purchase No. 259 was issued June 16, 1910, to Charles G. Caldwell and assigned by him to Agnes H. Caldwell on July 1, 1910, and the lands patented are $W\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 36, Tp. 56, N., R. 99 W. 6th P. M. and resurveyed as lot E of Lot 37, Tp. 56 N., R. 99 W. 6th P. M., containing 80 acres more or less. This patent contains the same reservations for right of way as found in plaintiff's exhibit 11.

382 Plaintiff's Exhibit 15 is a duly certified copy of the State's patent to Alvin C. Sinclair and is the same as plaintiff's exhibit 11, except that this patent is dated June 11, 1918, and numbered 448, the certificate of purchase No. 301 was issued March 17, 1911 to C. E. Wetmore and Hiram E. Bull and assigned by them to Alvin H. Sinclair on May 1, 1915, and the lands patented are the $S\frac{1}{2}$ NE $\frac{1}{4}$, Sec. 36, Tp. 56 N., R. 99 W., 6th P. M. and resurveyed as $S\frac{1}{2}$ of Lots A and B of Lot 37, Tp. 56 N. R. 99 W., 6th P. M., containing 80 acres, more or less. This patent contains the same reservations for rights of way as found in plaintiff's Exhibit 11.

Plaintiff's Exhibit 16 is a duly certified copy of the State's patent to David L. Heaston and is the same as plaintiff's exhibit 11, except that this patent is dated June 11, 1918, and numbered 447, the certificate of purchase No. 301 was issued March 17, 1911 to C. E. Wetmore and Hiram E. Bull and assigned by them to David L. Heaston on May 1, 1915, and the lands patented are $N\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 36, Tp. 56 N., R. 99 W., 6th P. M., and resurveyed as $N\frac{1}{2}$ of lots G and H of Lot 37, Tp. 56 N., R. 99 W., 6th P. M., containing 80 acres more or less. This patent contains the same reservations for rights of way as found in plaintiff's exhibit 11.

statute in such case made and provided, and upon the payment of the said sum of One thousand three hundred forty-four Dollars, the balance due, payable in seven equal installments, with interest thereon at the rate of six per centum per annum, interest to be paid annually.

384 Annual payments shall be made at the times as follows, to-wit:

(Here follows list of payments)

Time is an essential element in the premises, and the purchaser herein agrees, in accepting this Certificate of Purchase, to make the payments as above specified, or, on failure so to do, to immediately vacate said premises; thereafter remaining in possession of said property shall be unlawful, and the occupier may be summarily ejected, and the right of possession shall revert to the State of Wyoming, and previous payments made on account of such land shall be forfeited to the State, and the title thereto shall be in the State, the same as if no sale thereof had been made.

The purchaser may obtain patent at the time of making any annual payment by paying the balance of the purchase price and interest due at such time. Interest at the rate of ten per cent per annum will be charged on over-due payments.

In Witness Whereof, I have hereunto set my hand and caused the seal of the State Board of School Land Commissioners to be hereunto affixed at Cheyenne, this Sixteenth day of June in the year of Our Lord One Thousand Nine Hundred and Ten.

(Seal) Pat 452

BRYANT B. BROOKS
Governor

ROBERT P. FULLER
Commissioner of Public Lands
Assignment

Charles G. Caldwell the within named purchaser, for [an] in consideration of the sum of One [Dollars,] lawful money of the United States, the receipt whereof is hereby confessed and acknowledged, do hereby assign, transfer, and sell all my right, title, interest and claim in and to the following described tract or parcel of land, to-wit: The West Half Southwest quarter (Lot E) Sec. 36. Twp. 56 N., Rg. 99 W. unto Agnes H. Caldwell of the county of Park, in the State of Wyoming and to her heirs and assigns.

385 It is expressly understood that this assignment in no way releases the within named purchaser from liabilities to the State of Wyoming under his bond, or by force of law, to the injury of the interests of the State.

Given under my hand and seal this 1st day of July
A. D. 1910

CHARLES [C.] CALDWELL (L.S.)

..... (L.S.)

..... (L.S.)

Recorded at page 259
of Book 1 of Certificates
of Purchase.

This assignment recorded in
Office of Commissioner of Public
Lands of Wyoming
Aug. 1 18

386 Plaintiff's Exhibit 17-A is a duly certified copy of a blue print right of way map for two drainage ditches of the Reclamation Service, Shoshone Project, on lot 37, [To.] 56 N., R. 99 W., 6th P. M. as the same appears in the files of the Commissioner of Public Lands of the State of Wyoming; dated August 20, 1918, and filed August 21, 1918—showing the line of the two drainage ditches on Lot 37 by courses and distances properly tied to establish section corners. This blue print will be available for inspection at the oral argument.

387 Plaintiff's Exhibit 18 is a duly certified copy of a State School Land Certificate of Purchase No. 257 to Christopher Althoff, and is the same as plaintiff's Exhibit 17, except the lands described are 240 acres more or less and being E $\frac{1}{2}$ SW $\frac{1}{4}$ (Lot F) NW $\frac{1}{4}$ (Lots C and D) Sec. 36 (Lot 37) Tp. 56 N., R. 99 W. 6th P. M., is dated June 8, 1910, the cash payments are correspondingly different, and there is no assignment of this certificate.

Plaintiff's Exhibit 19 is a duly certified copy of a State School Land Certificate of Purchase No. 301 to C. E. Wetmore and Hiram E. Bull, as the same appears of record in the office of the Commissioner of Lands of the State of Wyoming, and is as follows:

388 Certificate of Purchase of School Lands No. 301

Date of Certificate March 17,
1911

Certificate of Purchase—
School Lands
Park County

Date of Last Payment Feb. 4,
1918

Name of Purchaser
C. E. Wetmore and Hiram

The State of Wyoming,
Land Department, ss

A. Bull, assigned

This instrument was filed
for record at eleven o'clock
A. M. on the sixth day of May
A. D. 1911, and duly recorded
in Book one on page 1.

Address Wakita, Okla.

Fund Common School

Permanent

S. G. HOPKINS

Commissioner of Public Lands,
Per R. B.

C. G. Caldwell, D. H. Bagley, David L. Heaston & Alvin C.
Sinclair, assignees.

Whereas, On the Fourth day of February, in the year of
Our Lord One Thousand Nine Hundred and Eleven,

C. E. Wetmore and Hiram A. Bull

purchased from the State of Wyoming, the following described State Lands, to-wit: Lot H ($E\frac{1}{2}SE\frac{1}{4}$) Lot G ($W\frac{1}{2}SE\frac{1}{4}$) Lot B ($W\frac{1}{2}NE\frac{1}{4}$) and Lot A ($E\frac{1}{2}NE\frac{1}{4}$) of original Section Thirty-six (36) Township fifty-six (56) North, Range Ninety-nine (99) West of the 6th P. M. designated upon re-survey as Lot 37, containing Three hundred twenty (320) acres, be the same more or less, under and subject to the provisions of the statutes of the State of Wyoming, providing for the sale of public lands of the State, for

the sum of Seven thousand Six hundred eighty and no/100 Dollars.

And Whereas, The said purchasers have paid to the State Board of School Land Commissioners of the State of Wyoming the sum of Two thousand three hundred four & no/100 Dollars, leaving a balance due of Five thousand three hundred seventy-six Dollars, payable in seven equal annual installments with interest thereon at the rate of 6 per cent per annum and 10 per cent per annum on all amounts not paid when due, interest to be paid annually. The purchaser may pay any annual installment at any time if interest is paid on the same to the time of the next annual payment.

389 The deferred payments shall be made at the times as follows, to-wit:—

(Here follows list of payments)

Now, Therefore, the said C. E. Wetmore and Hiram A. Bull, their heirs or assigns will be entitled to a Patent from the State of Wyoming to the land aforescribed, upon the surrendering of this Certificate of Purchase and fully complying with all the provisions of the statute in such case made and provided, and upon [thenpayment] of the said sum of Five thousand three hundred seventy-six Dollars, the balance due, with interest thereon as above provided.

Time is an essential element in the premises, and the purchaser herein agrees, in accepting this Certificate of Purchase to make the payments as above specified, or, on failure so to do, to immediately vacate said premises; thereafter remaining in possession of said property shall be unlawful, and the occupier may be summarily ejected, and the right of possession shall revert to the State of Wyoming, and previous payments made on account of such land shall be forfeited to the State, and the title thereto shall be in the State, the same as if no sale thereof had been made.

In Witness Whereof, I have hereunto set my hand and caused the seal of the State Board of School Land Commissioners to be hereunto affixed at Cheyenne, Wyoming, this

Seventeenth day of March in the year of Our Lord One Thousand Nine Hundred and Eleven.

JOSEPH M. CAREY

Governor, President State Board of School
Land Commissioners

(Seal)

O.K. W.F.S.

[Prrof] Read J.I.L.

Countersigned

S. G. HOPKINS

Commissioner of Public Lands, Secretary

390

This assignment recorded in
Office of Commissioner of Public
Lands of Wyoming
May -9'18. L.G.

Assignment

C. E. Wetmore and Hiram A. Bull, the within named purchasers for and in consideration of the sum of Seven Thousand Two Hundred and Fifty (7250) Dollars, lawful money of the United States, the receipt whereof is hereby confessed and acknowledged, do hereby assign, transfer and sell all their right, title, interest and claim in and to the following described tracts or parcels of land, to-wit:

Lot H. ($E\frac{1}{2}SE\frac{1}{4}$), Lot G. ($W\frac{1}{2}SE\frac{1}{4}$), Lot B. ($W\frac{1}{2}NE\frac{1}{4}$) and Lot A. ($E\frac{1}{2}NE\frac{1}{4}$) of original Section Thirty-six (36), Township Fifty Six (56) North, Range Ninety Nine (99) West of the Sixth (6th) P. M. designated upon re-survey as Lot Thirty Seven (37), containing Three Hundred Twenty Acres (320 Acres) unto C. G. Caldwell, D. H. Bagley, David L. Heaston and Alvin C. Sinclair of the County of Park in the State of Wyoming and to their heirs and assigns.

It is expressly understood that this assignment in no way releases the within named purchasers from their liabilities to the State of Wyoming under their bond, or by force of law, to the injury of the interests of the State.

Given under our hands and seals this 1st day of May, 1915.

C. E. WETMORE
HIRAM A. BULL

391 Plaintiff's Exhibit 20 is a large wall map showing some of the principal features of the Shoshone Project and the location of canals, lands, etc. relating to this suit, as described in detail by the various witnesses. (This map will be available for inspection at the oral argument.)

392 Plaintiff's Exhibit 21, is a duly certified copy of a letter contained in the official files of the Reclamation Service of the United States at Washington, D. C., and is as [folloss]:

393

June 16, 1916.

Acting Chief Counsel

District Counsel in Charge, Denver, Colorado.

Appropriation of the waters of Bitter Creek and Alkali Creek, Shoshone Project, Wyoming.

1. Receipt is acknowledged of your letter of May 27, 1916 in reference to the above subject.

2. You state that the drainage Engineer desires to use the channel of Alkali Creek for drainage ditch by deepening such channel, and he has requested advice how a right can be acquired by the United States in such a way that appropriations of water cannot be made by third parties from the drainage ditch. He appears to apprehend that private appropriators of water may build small diversion dams in the drainage ditch, and so interfere with the use of the ditch for drainage purposes.

3. If it is a fact that all of the land over which Alkali Creek passes is withdrawn under the second form and has not been entered, it seems that the withdrawal could be changed to the first form so as to prevent any one from entering thereon to construct dams. Withdrawal may also be made under the procedure authorized in 44 L. D., 412. For this purpose a survey of the center line of the drain could be made and a recommendation presented to this office that a strip of land feet wide, on each side of said center

line be withdrawn under the procedure authorized in
394 44 L. D., 412. The center line should be particularly described in the recommendation, and connected with public land survey corners. The latter will be the better plan in the absence of special reasons favoring the former plan as to which report is requested.

4. On Bitter Creek, according to your statement, the condition is different, in that the land has already been taken

up under the homestead law, or, where it is State land, has been purchased from the State. It is inferred from other correspondence in this office that before the construction of the Shoshone project, Bitter Creek was nothing more than a dry ravine, no water flowing therein except in times of freshet or when the snow was melting. If this is the case it appears clear that the United States would have right of way over the land under the Act of August 30, 1890 (26 Stat., 391) or under the law of Wyoming, Session Laws 1905, page 134, (Compiled Statutes 1910, section 3890), if, as a matter of fact, the Government land was taken up after October 2, 1888, or the State land after the Act of February 21, 1905 (Session Laws Wyoming 1905, page 134) became effective. This would without doubt be the result where the United States has deepened the natural channel of Bitter Creek, and would also probably be the case even where no steps have been taken by the United States to enlarge or deepen the channel, but where the United States is now using the formerly dry bed of the creek for an outlet for constructed drains above. Where the United States has not deepened or changed the creek bed, or is not using the channel as an outlet for constructed drain alone, it will be advisable to stake out the drain right of way in as permanent a manner as is practicable so as to give notice to all parties of the rights claimed by the United States.

395 5. The situation in regard to the dam in the channel of Bitter Creek has been practically settled by office letter of June 3, 1916 to Chief of Construction. As Bitter Creek is now being used by the United States for the greater part of its length as a drainage channel any attempt to interfere with it should be met by appropriate legal action.

6. Before taking any steps under this letter, it is suggested that you discuss the case with Judge King who is scheduled to be in your office at an early date. The copies of this letter for the District Counsel, Great Falls, for the Project Manager at Powell, and for the Engineer in Charge of Drainage, Denver, are enclosed and may be mailed, if this letter is in accordance with Judge King's understanding of the law. Please advise me of the disposition made of the matter.

- - -

E. B. HOFFMAN

Enc:

Copies to D.C., Great Falls, Mont.

P.M., Powell, Wyo.

Engineer in charge Drainage, Denver.

396 Plaintiff's Exhibit 22 is a duly certified copy of a letter contained in the official files of the Reclamation Service of the United States at Washington, D. C. and is as follows:

EER-G

397

Department of the Interior
United States Reclamation Service
Federal Building
Denver, Colo.

May 27, 1916

From District Counsel in charge,

To Chief Counsel, Washington, D. C.

Subject Appropriation of the waters of Bitter Creek, Shoshone Project, Wyo.

1. Please refer to the correspondence in your files in connection with the appropriation of the waters of Bitter Creek, Shoshone Project, Wyo.

2. The Drainage Engineer states to me informally that the United States is now using a portion of the bed of Bitter Creek for a drainage channel and has excavated the channel for some distance so as to deepen it several feet. It is now proposed to use the channel of Alkali Creek for a drainage ditch by deepening such channel, and he desires to know how a right of way can be acquired by the United States for the purpose of carrying on these drainage operations and preventing appropriators of water from building small diversion dams in Bitter Creek and Alkali Creek, thus preventing the deepening of the stream beds and making use of them for drainage purposes.

3. It is understood that all of the land over which Alkali Creek passes is withdrawn, second form, and no entries have been made thereon. It is suggested that if a survey was made on the line of the drainage ditch to be constructed in the bed of Alkali Creek, the land could be withdrawn first form, and thus prohibit entry thereon by any person for the purpose of constructing a diversion dam.

398 4. On Bitter Creek the portion of the stream used for drainage channel lies across lands taken under homestead, or across school lands acquired by purchase, and it is doubtful if the stream bed could be used for a drainage ditch except by condemnation proceedings to acquire the right of way.

5. There is now constructed in the Bitter Creek a small concrete diversion dam for the purpose of diverting water to the lands owned by the Lincoln Land Co., and to deepen the channel would destroy the diversion dam, and to construct the drain in a location parallel to Bitter Creek will increase its cost seven hundred dollars.

6. This problem of the use of the channels of Bitter Creek and Alkali Creek as right of way for drainage ditches is one intimately connected with the problem of the diversion of waste waters of Bitter Creek which your office is now considering.

E E RODDIS

399 Plaintiff's Exhibit 23 is a duly certified copy of a letter contained in the official files of the Reclamation Service of the United States at Washington, D. C., and the material parts thereof are as follows:

400 Subject: Shoshone Project: Report on Drainage of lands affected by Seepage

Department of the Interior
United States Reclamation Service

Powell, Wyoming, June 2, 1911

The Supervising Engineer,
U. S. Reclamation Service,
Helena, Montana.

Sir:

In compliance with your instructions a consideration has been given to the condition of lands in the Shoshone Project affected by Seepage, a study has been made of the data at hand and the following report is submitted setting forth our opinions as to conditions and recommendations as to required drainage. An examination has been made in the field supplemented by a study of a report by Mr. Thos. H. Means, under date of November, 1910, and of maps, profiles, diagrams of fluctuation of ground water levels, and records of gravel depths prepared by Mr. W. A. Stebbins in the Powell Office.

There are five principal affected areas as shown on the accompanying map. Proposed locations for main trunk

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7
3

drains are shown for each area. The maps and profiles transmitted herewith indicate the reasons for the selection of these locations. This investigation has been confined to a brief study of causes and a careful study of methods of removing seepage conditions. No attempt has been made to investigate the composition and productiveness of the soil and numerous other matters covered in Mr. Means' report.

401

Causes of Present Conditions.

The general conditions accompanying seepage are well known. The previous strata of soil are supplied with water in excess of their carrying capacity, or strata of impervious material are encountered which cause the water to rise to the surface of the ground. The immediate source of the surplus water is not known. The excess may come from main canals and laterals, from over-irrigation of lands or from accumulations of waste water. It is probable that all these causes contribute more or less to the seepage conditions existing on the project.

Surface ditches are being built by the settlers to prevent accumulations of waste water. Observations of the fluctuations of water surface in wells show that during February, March and April of the present year the water surface in most of the wells remained stationary and at a comparatively high level. This indicates the necessity for drainage, even though economical irrigation be practiced. A rapid rise of the water surface in the wells on and after May 1, shows that the turning of water into the main canal and laterals produced an immediate effect upon the ground water level.

Believing that it is far better to prevent seepage than to drain off surplus water with the accompanying losses of plant food, a series of careful measurements has been begun to determine the relative effect of the various immediate sources of the seepage water. This work has not progressed far enough to supply accurate data, but the insufficient and approximate data available indicate that losses as

402

great as 6% per mile may be taking place on parts of the Garland Canal. Cippoletti [wiers] are being installed at the heads of the main laterals and in a short time it will be possible to state with considerable accuracy the amount of water lost in various parts of the Garland Canal and the amounts delivered to the various laterals and distributaries.

The method of measuring water to individual farmers is not as accurate as desirable and it is not believed that the duties of water for the irrigation seasons of 1908, 1909 and 1910 are known with sufficient accuracy to warrant the conclusion that the average amount of water used is excessive. It is certain that some individuals have used excessive amounts and also have wasted water which has contributed to the injury of surrounding lands, but there is no reason to believe that these constitute the main cause.

On page 24 of Mr. Means' report duties of 2.31 acre feet for 1909, and 2.46 acre feet for 1910 are given. These amounts may be in error by an amount as great as 25%. In fact, the latest data which has been compiled indicates that 2.05 acre feet was the duty for 1910.

At the present time alfalfa is the principal crop grown on the project and there is no indication that the amount of water being used is above the average in common practice.

Prevention of Loss in Canals.

After it is found which sections of canal are subject to the greatest losses, measures should be taken to eliminate these losses. The works of this project were designed to prevent the silting of canals. The devices used for settling the water accomplish their purpose so completely that very little silt is deposited in the main canals. Experiments at the University of California indicated that three to five inches of clay reduce seepage losses from canals in loose gravel or earth by nearly 50%. Concrete lining will be of course
403 more efficient, but costly.

The erosive action below the drops of the Garland Canal will prevent the deposit of silt immediately below the drops, and seepage at such points can be eliminated only by the use of concrete or some other stable impervious lining. The larger part of the canal can be silted with clay which may be introduced into the water below the Ralston Reservoir. This can be accomplished by turning the flood waters of Alkali Creek into the Canal. Structures for this purpose have been built but have not been put into operation.

Drainage System Recommended.

While the importance of preventing the losses from canals and the excessive use and waste of water is recognized, personal examination of the seepage area, and of the data at hand leads to the conclusion that a drainage system must

be constructed at an early date to reclaim the lands now unfit for cultivation and to prevent a like damage to a much larger area.

The drainage system outlined on the accompanying map shows the main drains to be built by the Reclamation Service to which the farmers can build subsidiary drains. It is recommended that the main drains be constructed with an average depth of ten feet, a bottom width of four feet, side [slops] of $1\frac{1}{2}$ to 1, and berms five feet or more on each side. Ordinarily the slope of the ground is sufficient to give a good velocity and discharge. As the bottoms will be in
404 gravel no excessive erosion is anticipated.

These drains should be operated as open drains until their effectiveness is demonstrated after which some form of tile or wooden box may be installed and covered. If the ditches as at first built do not accomplish the desired purpose they may be deepened or extended as then deemed desirable.

Surveys and Detailed Drawings.

Prior to the letting of contracts it will be necessary to make more detailed surveys and borings to determine exact locations and grades and to secure data for the estimate of the quantity of material to be excavated and the preparation of contract, drawings and specifications. Unless the borings indicate the presence of rock, the contract should be let on straight yardage basis without classification.

Very respectfully,

W. H. SANDERS

Consulting Engineer

CHAS P WILLIAMS

Project Engineer

E. E. SANDS

Engineer

405 Plaintiff's Exhibit 24 is a duly certified copy of a letter contained in the official files of the Reclamation Service at Washington, D. C., and is as follows:

406 Subject.....

Department of the Interior
United States Reclamation Service

Huntley, Montana, June 12, 1912.

Board of Engineers to The Director, Washington, D. C.

Subject: Shoshone Project,—Drainage.

1. We the undersigned Board of Engineers have considered the results of the drainage investigations which have been carried on for about one year on the Shoshone Project.

2. Since the execution of Contract No. 411 with Lynn & Arnoldus for the excavation of 180,000 cu. yds. the seepage conditions on the Garland Flat have been rapidly growing worse. It is now evident that upwards one-half, probably 60 per cent, of the entire area in Lots 54, 55, 57, 58, 63, 64, 65 and 69 T. 55 N., R. 98 W., and lots 56, 57, 61, 62, 68, 74, 75, 76, 80 and 81, T. 55 N., R. 99 W. will be waterlogged past profitable cultivation by the end of the season.

3. The condition on the project is such that it is impossible to remedy it by any system of drains intended to release individual seeped areas, but it is necessary to provide for a complete lowering of the water plane over the entire area of the Garland Flat.

4. The drainage investigations have been carried on in a thorough manner and conclusions based thereon have been reached as soon as possible to determine on the work required to lower the water plane on the seeped areas in an economical manner.

407 5. The soil on the Garland Flat has a depth of from about one and one-half feet to about four feet, and is underlain by a stratum of gravel varying in thickness from about twenty feet to about fifty feet. The gravel stratum is underlain by soft sandstone which is practically water-tight. Apparently the thickness of the gravel is least over the lower

portion of the Garland Flat which tends to obstruct the flow of ground waters and force them to the surface. The percent of voids in the gravel is relatively small.

6. We deem it necessary to construct trunk drains across the Garland Flat at intervals of about one mile, these drains to be located so as to secure the steepest grades possible.

[6.] It is believed that the use of drain-tile is advisable.

7. Owing to the tightness of the gravel the total quantity of water to be removed is small, in consequence of which the drains will not be required to carry any large quantity of water.

8. It is obviously practically impossible to maintain economically open drains.

9. The first cost of excavating open ditches with bottom width of four feet and with side slopes $1\frac{1}{2}$ to 1 ft. will probably be about the same as that of closed tile drains of the capacity and depth required on the Garland Flat. The construction of tile drains should, and probably will, be welcomed by the owners of the lands crossed, while the excavation and maintenance of an open drain cutting diagonally through farm units would be strenuously objected to by every owner of land along the open drain.

408

Recommendations.

10. We recommend the immediate construction of about 15 miles of tile drain, the diameter of the tiles varying from 10" to 18". The locations and grades of the drains are shown on the accompanying drawings. We estimate the total cost of the work as recommended to be about \$90,000.

11. We recommend that the work be constructed by Government forces. The urgency of lowering the water plane and of preventing the spread of the seeped areas is of vital importance to the settlers. The delay incident to contracting the work, the long time that it will be necessary to give contractors if economical bids be obtained, and the further possibility of suspending a contract warrants the immediate commencement of the work and its construction by Government forces.

12. We recommend that the Supervising Engineer be authorized to purchase immediately a suitable drag line scraper

at an estimated cost of about \$7500, and such other construction equipment as may be found necessary for the vigorous and economical construction of the drains.

H N SAVAGE
D W MURPHY
CHAS P WILLIAMS

Encs-2.

409 Plaintiff's Exhibit 25 is a duly certified copy of a letter and draft of drainage statement contained in the official files of the Reclamation Service of the United States at Washington, and is as follows:

410 Department of the Interior
Washington

Feb 24 1912

Address only
The Secretary of the Interior
The Director
of the Reclamation Service.

Sir:

With reference to your letter of September 18, 1911, transmitting draft of a general statement regarding drainage:

I have revised the draft and send you herewith copy thereof, which you may forward to your engineers for their guidance and publish in the "Reclamation Record."

Very respectfully,

SAMUEL ADAMS,
First Assistant Secretary
PPW

Inclosure

411

Feb 24 1912

Drainage.

It is now recognized that it is the duty of the Reclamation Service to provide in connection with each project a complete and effective drainage system such as will, so far as practicable, prevent injury to the agricultural areas.

After visiting various projects, Secretary Fisher has declared that the practical operations of the Reclamation Act

authorize or compel him to provide, so far as practicable, for adequate drainage systems. Every settler who has taken a farm unit in good faith and who has lived upon it and cultivated it should be afforded reasonable protection against injury by seepage. Where feasible, he may be temporarily relieved from payments, or if the injury cannot be prevented by reasonable expenditures, the Secretary proposes to use every practicable effort to allow the entryman to secure another farm with as little loss as possible.

The propriety of providing drainage and protecting against the evil effects of seepage being thus established in the view of the Secretary, it follows that in preparing plans for all future work, special pains must be taken to study the conditions and to anticipate as far as practicable, the extent of drainage work necessary to meet these conditions. The cost of the main drains, both for waste water and seepage, should be included as far as they can be foreseen in the estimated building charge. The farm and minor drains essential to establish connection with the main drainage system must necessarily be constructed by the settlers themselves as the need for them becomes apparent after irrigation is commenced.

412 As for those projects which have been constructed, or partly constructed, and for which the building charge has been announced without provision for covering the drainage charge or with insufficient provision therefor, it will be necessary to provide the required drainage as part of the expense of maintaining the irrigability of the land, and this cost of drainage will be included as part of the annual cost of operation and maintenance. It is believed that this conclusion is not merely reasonable and just but also that it is founded on sound legal principles. Hereafter public notices and orders fixing charges for water rights and for operation and maintenance will make definite provision for drainage along the lines above stated.

The cost of drainage is to be assessed to all the land irrigated within the project, unless there be some exceptional condition, which should be submitted to the Secretary for special consideration. This general rule depends upon the fact that it is unfair to charge the cost of draining lands which happen to show seepage solely on such lands, because the individual hardship of their owners is an incidental result of the general benefits of irrigation and those who share the benefit should unite in relieving the incidental [hard-

ship/.] The man whose lands have not yet been seeped may, of course, object. He is not asking for relief but it is highly probable that in most instances he is contributing directly or indirectly to the unfavorable conditions. In any event he is getting the benefit of the irrigation and it is safe to
413 say that if no land were irrigated on the project there would be no seepage. While it is practically impossible [it] most cases to draw any sharp line between the men who are causing the seepage and those who are not, any one who does irrigate probably contributes to it. The balance of nature has been disturbed in artificially putting water on the land and can only be restored by artificial channels to carry off the surplus.

414 Plaintiff's Exhibit 26 is a duly certified copy of a letter contained in the files of the Reclamation Service of the United States at Washington, D. C., and is as follows:

Department of the Interior

415 United States Reclamation Service

Washington, D. C. November 29, 1912.

Office of the Director

The Secretary

Of the Interior

Sir:

In continuation of the general drainage policy on the Shoshone project outlined in letter of March 2, 1912, to the Department and approved March 6, 1912, it has now become evident that additional drains should be constructed during the coming year in certain parts of the Garland Flat to supplement and extend the system which was recommended for construction on June 27, 1912, and approved by the First Assistant Secretary on June 29, 1912. The drainage works already approved were described in some detail in the report of a board of engineers dated June 12, 1912, a copy of which accompanied the recommendation of June 27, 1912.

The approved drains are well advanced toward completion, and in a report of a board of engineers dated November 7, 1912, it is stated that the ditches have begun to show a marked effect in lowering the water plane on certain portions of the project. The area of seeped lands as shown by surveys made in October, 1912, indicate that the area af-

fectured by seepage sufficiently to interfere with crop growth, is about 1000 acres less than it was in June, 1912.

Additional areas have developed, however, which are already badly seeped or in which the water plane is becoming dangerously high, and a careful study seems to indicate that none of these areas can be relieved by the drains now under construction. It is estimated that, in addition to the drains

already authorized, about twelve miles additional will

416 be necessary to lower the water plane over the areas where seepage has already begun to appear or is threatened, and it is believed that the best interests of the project require that this work should be completed during the season of 1913. Closed or tile drains have been determined upon as best for this work and the total cost of the work is estimated at \$60,000.

On account of the nature of the material and the depth required, heavy machinery is necessary for the effective carrying on of the work. Additional equipment will be necessary to complete the work herein recommended during the coming summer, and an additional dragline excavator should be purchased and available for use at as early a date as weather conditions will permit in 1913.

Recommendation

It is respectfully recommended:

1. That approximately \$60,000 be allotted out of available funds for the construction of the above described additional drains.

2. That authority be granted to construct these drains by Government forces, to purchase the tiling required for this work and to purchase a suitable dragline excavator at an estimated cost of about \$9000, together with such other equipment as may be found necessary for economical construction of the drains.

Respectfully,

F H NEWELL

Director

Recommendation approved:

Dec 7 1912

SAMUEL ADAMS

First Assistant Secretary

ECF

417 Plaintiff's Exhibit 27 is a duly certified copy of a letter contained in the official files of the Reclamation Service of the United States at Washington, D. C. and is as follows:

418 Department of the Interior
United States Reclamation Service

Washington, D. C. June 27, 1912

Office of the Director

The Honorable

The Secretary of the Interior.

Sir:

With reference to drainage on the Shoshone project, the general policy to be pursued was indicated by the Department in letter of February 24, 1912, and with reference to this particular project, by approval on April 6, 1912 of recommendations from this office of March 2, 1912.

A board of engineers has made report dated June 12, 1912, copy herewith, upon the conditions on the project, and has made certain recommendations which meet the approval of this office. Instructions have been issued to take steps to carry out these recommendations. Meanwhile the matter is being presented to the Department for formal approval of the larger features, as follows:

Recommendations.

1. That approximately \$90,000 be allotted out of the available funds for construction of drains on the Shoshone project.
2. That the work be done by Government forces.
3. That purchase of suitable drag line scraper be made at the cost of about \$7500, together with such other equipment as may be found necessary.

Very respectfully,

E. H. NEWELL

Director

enc.

Jun 29 1912

Recommendations approved

SAMUEL ADAMS

First Assistant Secretary
ECF

419 Plaintiff's Exhibit 28 is a duly certified copy of a letter contained in the official files of the Reclamation Service of the United States at Washington, D. C., and is as follows:

420 Department of the Interior
United States Reclamation Service
Washington, D. C. March 2, 1912

Office of the Director

The Honorable

The Secretary of the Interior.

Sir:

With reference to drainage on the Shoshone project, Wyoming, there is submitted herewith for approval a statement of the policy to be pursued, in accordance with the principles announced by the Department February 24, 1912.

Briefly reviewing the conditions, it may be stated that when the project was planned it was assumed that necessary drainage, except that required for the removal of surface waters, would be built by the farmers acting under the provisions of the State law and not from the Reclamation fund. It subsequently developed, however, that drainage on a large scale was necessary, and that the irrigability of the lands could not be maintained unless these drains were provided by the Reclamation Service. This is largely because of the fact that on certain areas where large amounts of water are being used for irrigation, the need for drainage is not yet apparent and the settlers who are using this large amount of water and who are indirectly causing seepage on the lands of their neighbors are not willing to join in any organization to maintain the irrigability of the entire project.

When Secretary Fisher was in Idaho in September, 1911, he announced orally that in his opinion the Reclamation fund should be used for the purpose of providing drains on the project. A draft of the principles stated by him was
421 issued by the Department on Feb. 24, 1912, for guidance of the engineers and for publication. It is desirable to apply these principles and secure specific authority as above stated with reference to the work on the Shoshone project, confirming the plans already made and definitely authorizing the continuation of the work.

Present condition on the project urgently require drainage at an early date. Construction work has already been taken up in the areas where drainage is most needed, and studies are being made leading to the preparation of plans for the drainage of the entire project where necessary. It is impossible at this time to give any accurate estimate of the cost; it will probably, however, amount to several hundred thousand dollars.

It is recommended:—

1. That on the Shoshone project, Wyoming, the necessary drains be provided at the expense of the Reclamation fund to enable the individual farmers, or groups of farmers, to maintain the irrigability of the lands of the project.

2. That the cost of drainage be included in the estimated building charge wherever such charge is yet to be stated or modified.

3. That for the portion of the project for which the building charge has been announced without provisions for completely covering the drainage charge, the necessary cost of drainage be included as part of the annual cost of operation and maintenance.

4. That plans be made for continuing the drainage system until protection is afforded to all the irrigable lands within the project.

Very respectfully,

F. H. NEWELL
Director

MAR —6 1912

Recommendation approved

SAMUEL ADAMS

First Assistant Secretary
CWC PPW FWC W.Hill

422 Plaintiff's Exhibit 29 is a duly certified copy of a letter contained in the official files of the Reclamation Service of the United States at Washington, D. C. and the material parts are as follows:

423 Supervising Engineer's Office
Helena, Montana
Subject

Department of the Interior
United States Reclamation Service

Helena, Montana, May 13, 1912.

Board of Engineers to the Director, Washington, D. C.

Subject: Shoshone Project, Drainage Trenches.

1. This Board has examined seepage conditions on the Shoshone Project and the work now in progress looking to the relief thereof.

2. In 1911, contract was let to Lynn and Arnoldus for the construction of certain drainage channels in the vicinity of Powell and Garland, amounting to about 179,000 cubic yards. The contractor installed a traction steam shovel for this work, and, although well adapted to handle the character of material encountered, it cuts a larger trench than specified and the contractor encountered great difficulties with frozen ground during the past winter and, owing to financial difficulties, was recently obliged to abandon his contract and it is now being completed by Government forces with the same equipment.

3. The equipment installed and now at work is not sufficient to complete the contract within a reasonable time, and the Supervising Engineer has already obtained authority to purchase additional equipment for this work and subsequent drainage work.

4. We regard the drag line scraper as the best kind of machine to use in making open drainage lines under
424 these conditions, but there will be some delay in obtaining such machinery as it is not held in stock.

5. Where feasible, we consider underground pipe lines far preferable to open trenches, and we believe that these are [dapted] to the solution of the drainage difficulties on the Shoshone Project in some instances.

6. A [drage] line scraper can also be used to advantage on the Huntley Project, and negotiations have been inaugurated for the purchase of a trenching machine such as is used for sewer work and for pipe drains.

7. The details of purchase of machinery should be left with the Supervising Engineer in consultation with the Drainage Engineer.

8. Unless otherwise ordered, investigations will be immediately made regarding the feasibility of manufacturing drain tile upon the ground both for the Huntley and Shoshone Projects. We consider this a wise measure and urgently recommend that the drainage work on both Shoshone and Huntley Projects be pushed as rapidly as economy will permit.

9. One of the most important measures to be taken to remedy seepage conditions on these and other projects is the enforcement of economical and careful use of water by every means within the power of the Department.

10. In our judgment, this is to be attained chiefly through two measures: First, the delivery of water on a rotation basis, using as large heads and as short deliveries as appears practicable in each case, leaving the sub-laterals dry between deliveries for as long a period as practicable. Second, fixing

425 charges for maintenance and operation wholly or partly on the basis of the quantity of water used, thus making it to the financial advantage of each irrigator to use the minimum quantity of water which will answer this purpose.

11. A striking illustration of the influence of the latter principle is the results on the North Platte Project where the statistics show that the land taking water on a purely acreage basis and entitled only to a maximum limit of three feet in depth have actually used an average of about 4.8 feet in depth, while State lands which purchase water by the acre-foot average only 1.8 feet in depth and are reported to have secured better results agriculturally than the lands using the larger quantity of water.

12. The best immediate means of improving the situation is by limiting irrigators to the amount of water to which they are legally entitled under the public notice, and where this is too great to amend the public notice to conform as nearly as possible to the actual requirements.

13. Such limitation of water deliveries is, of course, a matter of great embarrassment to the project Engineers and they should have the best support of the Washington Office in such efforts.

14. We regret to learn that recommendations made by the Supervising Engineer for fixing operation and maintenance charges for 1912 on the North Platte Project in accordance with the water used have not been approved by the Department. We urgently recommend that steps be taken to inaugurate such policies wherever possible for the year 1913, which will go far towards solving the drainage problem.

A. P. DAVIS
H. N. SAVAGE
A. J. WILEY
D C HENNY

426 The defendants offered the following evidence:

L. J. WILLIS, called by defendant, testified:

My name is L. J. Willis. I live in Cowley, Wyoming. Have lived there since September 8, 1900. I was in the cattle business. For 8 years I have been County Commissioner of Big Horn County. I first saw Bitter Creek in the Spring of 1901 from its head to its mouth. I had shipped cattle into Wyoming and turned them loose at Frannie and below Frannie on Sage Creek. We had 1300 head and they gathered along the Shoshone River and on to the Garland Flat in this section of the country. We rode after them during the Winter and rounded them up in the Spring. It was in March of that year that I first saw Garland Flat or Bitter Creek. We were gathering cattle off of the big bench on the North and drifting them on Bitter Creek, right at the forks of Bitter Creek, gathering them prior to going to the mountains. I was engaged in the cattle business there 5 years. I would see Bitter Creek at different times during the Winter and in the Spring on the round-up. I was there probably once or twice a week. I remember Bitter Creek in March, 1901. There was quite a flow of water in it during the month of March and up until along the last of April. We moved out there in May and possibly there was water standing or running in the afternoon in the fore part of May. The flow of the water depended on the sort of Winter and Spring. At the time I saw it in the Spring of 1901 there was a fairly good stream in the morning, but in the afternoon

there would be a flush of water caused by the snow melting. The water ran continuously that Spring—not a big stream, but, as I remember, it did not stop running. I saw Bitter Creek again the following Winter, but did not camp on it until the next Spring. The condition of the water the next

Spring was about the same as the year before. There
427 was plenty of water there. There was running water there every Spring that I ran my cattle there. It would run up until we would leave there the last of April or the first of May. That condition existed during the 5 years I was there.

I think I know the location of the bed of that stream. The South Fork headed right in around close to Corbett or Eagle's [Next,] North and West of Powell. That branch was from 4 to 6 miles. At the head there was quite a little ravine. As it came to the Flat it had a permanent channel and the channel increased in size as the tributaries came in. The channel would vary, from 2 to 4 feet deep and possibly 6 feet wide. It was well-defined. The other channel came from the North and swung around to a Westerly direction from the fork; its North end a little East of Powell. It united with the other channel in about 4 miles. It was very much like the other channel only not so large. They come together about $3\frac{1}{2}$ miles above Garland. The channel from where they came together down to Garland was from 4 to 6 feet deep. It increased in depth and size as it came down the valley. It was possibly 8 feet to 20 feet wide. I am familiar with the channel from Garland down to the Shoshone. We always trailed our cattle down that creek. I judge that channel would average from 4 to 8 feet deep and from 15 to 25 feet wide. About a mile and a quarter below Garland there were some little bitter springs when we were there—quite a seep. We left there when they commenced to take up the Flat and conditions were against us. We didn't get very good treatment among the settlers locating in that country and we moved. We camped on this creek every year I ran cattle. We usually ran big outfits brought from Arizona. From the forks down is pretty much all sage brush and from the forks to the rim rock there was some grass. We camped at the upper end most of the time. We got water from the creek.

428 I am familiar with Garland townsite ditch. I constructed it in the Fall of 1912. It took water out of Bitter Creek. I remember the flume across Bitter Creek built by the Mormon Colonists and also the bridge. The ob-

ject of the culvert going over the ditch was to let the spring and flood water go out and not damage their ditch.

The Mormon colonists constructed a bridge across Bitter Creek up at their dipping vat. They built it in 1903 I think. There was quite a freshet in the creek and quite a flow of water, so it was not safe to cross the creek with sheep and they constructed a bridge to run the sheep across while dipping them.

Cross-Examination.

There are dry gulches or coulees in that neighborhood—little ravines put into the head of this creek. There are lots of waterways putting into the Shoshone River. I suppose you would call them gulches. They are not dry in the Spring. I would say there are dry gulches putting into the Shoshone River. There is a difference between Bitter Creek and other dry gulches. The banks don't look different. So far as the size of the banks are concerned, they are just as deep as those of other dry gulches. Apparently the channel would be the same. I think they do have a number of bridges across other dry gulches within a few miles of Bitter Creek and on each side of it.

Water was running in the head of Bitter Creek in the Spring of 1901. I don't know where the Railroad Company's camp was on Bitter Creek that Spring. I don't know whether or not it was true that they had a stable in which horses were kept in 1901 from January on, located in the bed of this creek. The water that ran in Bitter Creek from February to May came from snow drifted here. The rim rock lies North and West of Powell Flat. That snow water then went as far as Garland. Earlier in the Spring there was other snow on the Flat. It is not a fact that all the dry gulches out there had water in them at the same time the creek had. I know this because I rode over the range and **was there. I cannot testify that Bitter Creek was the only**
one that had water in it. It was the most prominent
429 one and had water longest. The other gulches had
water in them that ran possibly 2 or 3 or 4 weeks. The gulches all headed back towards the rim rock. I would say there are from 10 to 15 miles of rim rock where the water would run into Bitter Creek. I have no idea of the number of square miles the water would drain from, but more than 10 square miles. The entire area from East to West I would say would be 15 miles. I couldn't say what is the area of the entire drainage basin.

Re-Direct Examination.

The prevailing winds around Bitter Creek blow from Northwest to Southeast. It drives the snow off the Big Bench, and deposits it under the rim rock. I have seen it 15 feet deep and rode over it on horse-back. After I quit the cattle business I ran sheep there in the Winter time and watered them on the snow bank. Two years ago last Winter we wintered right along the rim rock above Powell Flat and fed the sheep during the bad weather. That is how I know about the snow. A heavy growth of vegetation would grow and mature at the rim rock and Big Bench when it didn't down on the Flat.

CHARLES G. CALDWELL, called by defendants, testified:

I am one of the defendants in this case. I live upon and own the land in controversy. I live on my homestead directly West of the school land. Have lived there since 1910. Before that I lived at central Nebraska where I farmed and have been farming here since 1910. I moved to my homestead about the first of April. I first went there in March. My house is about 400 feet south of where the south branch of Bitter Creek crosses the section line road. Since then I have been continuously familiar with Bitter Creek. Both branches cross my homestead. They come in on the West side and meet just across the road on the other side. I have about $\frac{3}{4}$ of a mile altogether of the creek across my lands, including the homestead and that in the school section. I buy water from the Government for the irrigation of 430 my homestead. I irrigate my land in the school section with water from the creek. The other defendants enlarged my original ditches from the creek, and have extended them so far as to take in the South school section except about 40 acres of the Northwest corner. All of the school section has practically been irrigated, except that 40 acres in the Northwest part which lies above the extension of Caldwell's ditch No. 2. These lands have been irrigated with water from Bitter Creek since 1915. I first irrigated my land in that Section in the Spring of 1911. There are about 75 acres which I have watered on that 80. I now own the South half of the Southeast of the school section which I have myself in the last three years watered, all of it except about 8 acres included in that open drain. I never watered that.

The open drain is 9 feet deep at the end of the tile and the deepest cut to the best of my knowledge was 14 feet, including the spoil bank itself just a trifle over 100 feet wide. I never have measured the size of the trench itself. The bottom of it would be about 4 feet wide and the slope of the bank is about one to one. There is no protection to prevent live stock from drifting into that ditch. My ditches were first constructed in 1911 and finished in 1912. No, I mean they were started in 1910 and finished in 1911. I divert water from what is known as the South branch of Bitter Creek, but I also then applied for and [receive] a supplemental right out of the North branch of Bitter Creek which leads into Caldwell's ditch No. 2, the one going North from the original diversion works. I am reasonably familiar with the time water is turned through the distributing canals of the Government project as I have to get water from them. Prior to the time water is turned into the Government distributing canals, if the weather conditions are favorable by the first of March the stream becomes quite a
431 stream of water, if it is warm, melting weather, and the stream continues to rise in volume until some time in April. It then gradually decreases as the quantity of snow decreases, and about the first of May usually the Government turns their water into the ditches and within a day or two the waste water comes down. Of course I am unable to tell just when the water from the melting snow quits and the water from the Government system begins. There is a continuous flow each spring from about the first of March until the first of May, or the time when the Government irrigation begins. I first saw Bitter Creek in the first week of March, 1910. The Reclamation officials took me out and showed me the place where my homestead was open for settlement so I could file on it and also showed me Bitter Creek. The channel then was two feet deep from the top, but the rest of it was filled with snow and ice such as these streams would naturally have at that season of the year. I fell into the water then up to about my waist. Every spring since I have been there the same condition practically exists. I remember particularly the Spring of 1912. I think it was about the middle of March when a gentleman brought a bunch of sheep between the branches to the West and got 400 or 500 of them into that North Branch. I think he lost 75 or 80 by drowning. I helped the man pull them out. I know we worked there a couple of hours. I don't know of any water being contributed to this stream by the Government projects prior to the first of May or

when the Government irrigation begins. There was one artificial drain entering Bitter Creek above my place constructed last year. It is on the South branch. Before that there were none above my diversion works. The only surface water coming in the early Spring into Bitter Creek before the Government canals were filled would be from a rain storm or a heavy snow. There would be no water that had been diverted from the Shoshone River coming into Bitter Creek before the Government canals carried water.

432 It would be hard for me to say whether there was any underground seepage from the Project lands during the Spring. I don't know of any if there was. When the Government distribution stops in the Fall there is a flow of water in Bitter Creek similar to the one in the Summer for from 18 to 30 hours after water has stopped flowing in the main canal. Then the flow in the creek ceases and the creek becomes dry. But since the creek has been deepened there has been water in it ever since the water came from the open drain. Water is in it all Winter; that is, frozen ice. Wherever I have seen it there is water in it now.

Prior to the deepening of the channel above my headgate the creek was dry. I don't remember when the Government entered my land for the purpose of deepening this channel. It was sometime early this last Summer of 1918. I don't think it was done with my consent. I wish I could have kept them off. They dug up the land in a frightful shape that is difficult to express. They had a drag-line and they were digging some dirt out of the bottom of the creek and most of it out of the sides, making it wider and somewhat deeper. When they came to a bank bending the right way they would cut across the neck of it; if it bent the other way they went around it. I was informed by the man in charge they aimed to make the excavation 10 feet deep below the surface of the surrounding land; that would mean in some places the channel of the creek would not be deepened any; in other places a foot; in other places two feet. This excavation followed the existing channel reasonably close except in places where they would try to straighten it and cut off a corner and leave an island. They piled the earth around on the other side of the stream behind their drag-line. They took no care as to leveling or smoothing this earth out. At some other places they left a better looking spoil bank than they did on mine. They smoothed some of them down. This excavation and
433 piling of earth spoiled the appearance of my farm for the purpose of making a farm home out of it. It affected its market value; at least it would to me if I had

to buy it, and it would to the ordinary purchaser. Powell Flat is considered to be one of the most beautiful farm countries anywhere. The farms are well cared for where they can afford to do so.

This photograph A, Defendants' Exhibit A, was taken at a point 75 feet from the West line of the Caldwell homestead, in the new part of these excavations and it shows a new channel and also the cave-in where I am standing. This does not show the original stream channel but only the new work. Photograph B, Defendant's exhibit B, was taken from a point within 10 or 15 feet of my headgate showing the channel of the creek as excavated, together with brush along what would be the North side of the old channel. It also shows the channel as made by the water going through my structure. The washed channel at the left of the picture where there is no water was the original channel and where the water is shown is the new work. The earth piled along the channel is a spoil bank that they took out. Photograph C, marked Defendants' exhibit C, was taken from almost the same point as the other one was, only this shows a sloping off of the side bank as left after the excavation and shows a part of the new channel and some of the spoil bank that they put on our side of the creek, covering up some of the growth of the willows and vegetation. It shows just a slight bit of the old channel around the edge on the left side of the photograph.

Photograph D, marked Defendant's exhibit D, shows a growth of willows and brush along the North side, together with dirt that was taken up from the excavation on the other side of the creek and placed over there. This does not show much of the original channel. It was not deepened much. The original channel was directly under this brush and willows and probably 10 or 15 feet wide. That brush was there when I came there early in 1910.

434 Photograph E, marked Defendants' exhibit E, was taken just a few feet below showing the willows and growth again and the spoil bank, together with the old channel to the right of the picture as it went around. The channel in the middle foreground is a newly constructed cut-off and the abandoned channel at the right was the original bed of the stream. The pile of dirt shown above the willows is a spoil bank taken from the other side and placed there. This is a fair picture showing the manner in which they deposited the earth from this excavation. These photographs were taken on the 9th of December 1918.

Photograph F, Defendants' exhibit F, was taken immediately at a point just below the section line looking East where the forks of the two creeks come together. It shows a new channel directly in front with the old channel to the left and the old fork coming in there. The island in the middle is the ground they left there. The channel in the winter is the new channel. The channel showing to the left is the old channel of the creek before it was deepened and in spite of the work that has been done the water still flows right around in the same way as it did before. All they accomplished was to dig up more land.

Photograph G, Defendants' exhibit G, shows the natural caved condition of the banks of the stream as left after the excavation. It is of a part of the new channel taken down on the school land. It practically coincides with the old channel except that they dug the South bank and made it wider. I couldn't say that they made it any deeper, but they smoothed it up. I think the weight of the spoil bank at the top has a tendency to make the bank cave. The bank caved until it froze up about the middle of December. It has not caved since then. Photograph H, Defendants' exhibit H, was taken a little further down the stream. It shows a caving off of the South bank of the stream, and a new channel after it was caved in. It coincides with the original channel except just a little wider.

435 Photograph I, Defendants' exhibit I, shows a cave a little further down the stream about the middle bend below there. The channel coincides with the original channel except it is wider.

Photograph K, Defendant's exhibit K, shows a bend in the creek which the bank sloughed and caved down on the ice.

Photograph L, Defendants' exhibit L, was taken from a point immediately on the top of the bank showing the same picture as photograph K, together with the growth on the North side and the spoil bank further down and the cave further down and the general crookedness of the creek as they left it. It shows the original channel after it was worked over. They dug off the bank on the South side. A point shows here in the original creek that is carried into the new work. The banks shown along the creek are the spoil banks. This picture illustrates the manner in which the dirt has been deposited. The smooth land in the background of the photograph is part of the rest of the farm, and is a fair illustration of the character of the farm before this excavation was begun.

Photograph M, Defendants' exhibit M, was taken from the same point as photograph L, only the machine was turned around and looked up the stream, showing the general character of the condition in which the spoil bank was left. It is a fair illustration of the manner in which they have piled this earth on my land and illustrates the original character of my farm and its present appearance.

(Defendants' exhibits A to M, inclusive, were offered and admitted in evidence and objected to by Plaintiff for immateriality and because there is no method by which the Court can compare these photographs with the condition that existed prior to the time that the creek was deepened.)

The stream bed through my land before this work was performed varied from 6 feet to 24 feet in width and from 7 to 10 feet in depth.

436 Photograph N, marked Defendants' exhibit N, was taken from a point very near to the Northwest corner of the Powell townsite looking West showing Hart Mountain and the bench and the intervening land lying between Powell and what was known as the bench. The bench shown is that in which Bitter Creek has its origin. It is a very good picture of the principal water shed of this stream. (Defendants' exhibit N offered and admitted in evidence over the objections of plaintiff).

Hart Mountain showing at the extreme left of this picture is about 20 miles South and West of Powell, but it is within the watershed of Bitter Creek. The photograph shows the location of the bench, following very closely to the line upon the Government map, which has been stated to show the boundary of the watershed. The land shown in the photograph lies Southeast of the bench. This photograph shows the higher ground above the Government's Lateral A, which higher ground we call the foot-hills of the bench.

Mr. Ide's land is just across the road from some of mine in the adjoining section. He owns the South half of the Southwest quarter of Section 41. The Government's work of deepening and altering the channel extended on Mr. Ide's land and is very much of the same character there and has the same effect upon his land. In connection with this work the Government constructed a new lateral or a new ditch out of Bitter Creek on Mr. Ide's land. I think it is something like 1500 feet long. It was built during the Summer of 1918. That was not the first Lateral constructed by

the Government from Bitter Creek. They constructed another one in 1917 and they used that one first in 1917. It is about a mile and a half up the South branch above my diversion works. That lateral takes water which I was using—took water from my diversion works. That was in 1917. I applied to the Water Superintendent of that division and he came up and delivered me my water, and I wasn't bothered any more that season. I think they did not use
437 that ditch in 1918, although they may have used the overflow, but they raised their structure so as to allow my water to go through their structure down to my diversion works. I think it was not constructed prior to 1917. I am quite sure. Up to that time the Government had not to my knowledge constructed any ditches for the purpose of utilizing waste water or seepage water. The first few years the Government refused to allow us to waste any water at all. They modified that rule and we could waste water if we would provide waste ditches to carry it off to some natural channel so as to protect their system. They wouldn't allow us to put any of our waste water back into the system again. They compelled us to take it to the creek. That was later modified. Then they allowed the farmers where it could be done to put the waste water back into their canals and laterals again and also the seepage water. The first time I remember as to their change of practice in respect to prohibiting the carrying of waste water in their distributing canal was, I think, in 1915. When I came here we were not allowed to have any waste water. The ditch rider would go below our land and if he found any waste water running off our land he would estimate or measure it, and then he would measure it and then he would go up to our headgate and shut off the amount of water we were wasting off the land and thereby deprive us of the use of it. That was afterwards changed. They told us we could have some waste water but we would have to provide waste ditches to carry it off. The Government constructed a new ditch out of Bitter Creek with its headgate above the headgate of my ditch, so that it leaves no water in Bitter Creek near my headgate, so that I cannot get any water from Bitter Creek into my ditch. It has the same effect upon my school land. I cannot get any water for the school land under present conditions. My land is worthless without water.
438 With water it is worth \$250.00 an acre. This estimate is based upon my knowledge of the sales of similar land. I have an adequate water right for this land.

The expense of maintaining my canal has been practically nothing. Three years ago we raised a fund and levy of 15c per acre, for maintenance charges of my canal. I was custodian of that fund and I think we still carry a small balance. Without water my land would not make very good grazing land. I could not place a value on it. I think they claim for taxation and assessment purposes \$5.00 an acre. That is true of the other land in the school section without water. The irrigated lands of other owners in the school section are as follows: Earl Kyser, has 80 acres; D. E. Townsley has 80 acres; Mr. Thornburg has an 80 through which the creek runs almost the entire length and in which there are approximately 65 irrigable acres. I own the South half of the Southeast quarter which contains about 72 irrigable acres. Christopher Althoff owns 200 acres under the ditch. Mrs. Caldwell is the owner of 80 acres under the ditch, which are irrigable. There is only one Christopher Althoff to my knowledge.

About 3 acres of my land in the school section and about 3 acres of my land on my homestead has been rendered useless by the spoil banks the Government has thrown out. The value of that land is the same as I have mentioned. I would say the entire farm has depreciated 50% in value through the unattractive appearance of the spoil banks. It would be actually impossible to sell my farm for more than half its value. The spoil bank is an unsightly sight. The peaks are barren. They vary from a few feet wide to some places 100 feet wide, and vary from a few feet high to probably 10 feet high. They are piled along the South side of the creek. In fact you can't see my house. You can't see the North side of the farm. It is an unsightly looking place. Even if I could afford it, I would be unable to build as beautiful a farm home as I could if that wasn't there. The excavation work by the Government across my land did not carry the creek down to the gravel. I have never been able to find any gravel on my land in the bed of the stream. The result was that the Government's work did not reach the water carrying stratum. About 270 acres of land have been irrigated with water from Bitter Creek from that ditch. The lateral built by the Government did not affect the diversion works but the deepening of the creek tore them out. The Government cut a trench across the road and diverted the water from the original stream before it deepened and built a bridge across there which took

water away from the Lincoln Land Company headgate or the townsite diversion work. That was done in the Spring of 1918. The water Superintendent of that division came down there and ordered it filled up which was done. After that the deepening process was gone through with by the Government with the result that these head works were carried out. It is not possible to get water into that ditch from the lowered channel of the creek.

The creek also crosses the Althoff land. About two acres of his land has been similarly affected by the spoil bank and also about 3 acres or more of Thornburg's land. Mrs. Caldwell's land is included in my original 6 acres. The spoil banks have the same effect on Ide's land or a little worse probably because he not only had the excavation from the creek, but the excavation from the digging of that new lateral which was about the same size as the creek as it had to carry 50 second feet of water. With a loose tape down there we estimated a total of about 7 acres of his land was similarly injured. In respect of all these lands the character of the damage was the same and the value of the land is about the same.

440

Cross-Examination.

I have made no survey of the amount of land that has been used by the Government in deepening Bitter Creek through my place, but I had a tape line and a couple of disinterested parties. I have not the figures with me, only the total results. Before Bitter Creek was deepened it would run from 12 to 24 feet wide and that width for a distance of about 120 rods would figure up less than an acre of land. I didn't farm in the bed of the creek. I farmed all my land except that one acre in the bed of the creek. As to how much the Government widened Bitter Creek, I will say that there were places where they dug a brand new creek and there were other places where they widened it probably 6 or 8 feet and other places only two feet. It was not symmetrical. I did not mean when I said 6 acres of my land was ruined to say that that amount of land was taken up by the Government in deepening the creek, but it includes the spoil bank they placed up on top. If they had widened it all the way through it would probably have taken up more than an acre because there were places where the creek would wind around and they would cut a new channel so that the part that stands out there is useless now so far as any purpose

is concerned. I cultivated my land right up to the very edge of the creek before it was deepened. My alfalfa was covered up by the spoil bank. There was one place where the spoil bank was 100 feet wide, but it varies. It is very irregular. We made a survey to estimate the amount of ground taken up by the spoil bank, but I haven't the figures with me. My homestead had three acres. Mrs. Caldwell's 80 had two acres and my other 80 has two acres of land ruined by the Government.

Outside of the taking of a portion of the land for spoil banks and a portion for the widening of the ditch or making of new channels, the unsightly appearance of the spoil bank was the only other damage to my farm by the deepening of

Bitter Creek. The only basis of my claim for damage 441 to the rest of the land is the unsightly appearance of the spoil banks. The spoil bank running through my farm is of such unsightly appearance as to decrease the value of the farm 50%. The land will grow just as good crops as before outside of where the water probably backs up against these spoil banks and spreads out as some of the witnesses spoke about; that is, the soured land. As to whether I have any soured land, I must say that I haven't watered any land since the spoil banks were placed there. I have never found on my land that these spoil banks are built in a way to prevent the collecting of water. I can say that the total damage is the damage occasioned by the use of the land by the spoil banks and the use of the land which I could otherwise cultivate and also the unsightly appearance of the bank itself. Of course it was necessary in digging this canal to put the dirt out somewhere. They might have hauled it off or onto the Government's own land, but it might have cost them a lot of money. The natural place would be to pile it along the banks of the ditch.

As to whether there was a large amount of seepage water in the years 1908 and 1909, that ran not only in the Spring but through the entire year, I cannot say. I was not here in 1908 and 1909. I didn't come until the Spring of 1910. I have no knowledge of the amount of irrigation there was in the years 1908, 1909, and 1910 on the lands above my diversion.

Re-Direct Examination.

I have used water flowing in Bitter Creek for the irrigation of land in the school section before the Government turned its water into its system and after it had turned it out in the Fall. In the early part of April and before the Government turned their water in, if I thought the land needed water I turned it on my land or if I needed it for domestic use I ran it up through my stock yard. I considered that a beneficial use. I think I have acquired
442 a benefit from it. In the Fall of the year. After the Government turns the water out of its canals Bitter Creek is dry unless there comes a rain. It is fair for me to assume that in the Spring the conditions are the same before they turn their water in. That is the way I reached my conclusion that there is no seepage water in the Spring. There are sometimes rains of sufficient amounts to cause a flow which I have used and from which I have derived benefit.

Re-Cross Examination.

I don't know whether I would have any water in this stream in the Summer months for irrigation were it not for the Government irrigation above me—maybe I don't understand which are the Summer months. I think I would have plenty of water up until the first of May, possibly longer. If there were any rains, I would be prepared to catch them. After the snow was gone any water I would have had would be simply run-off from the rain. The value of my land with a water right is \$250.00 per acre. Its value is practically nothing without a water right. A water right from the Government is a trifle over \$80.00 and then operation and maintenance charges are added to that. These operation and maintenance charges come along every year and amount to about 10% of the \$80.00. It has never yet exceeded \$1.00 a year. I think that was the minimum this year. In some places the maximum I think was more than a dollar and a quarter. The cost of a water right alone at the present time is \$80.00. The way I figure out \$250.00 an acre value for land with a water right which is not worth anything without a water right is that it rents for \$12.50 an acre, and that is 10% on \$250.00. I am asking for damages not on a basis of what a water right is worth but what the land is worth on the basis of what I can raise on it. I prefer my own water right. Sometimes the Government won't give

me water when I want it. My preference for my own water right rather than depending on the Government's system is not so much the amount of water, but the fact that
443 I can go and get it whenever I want it and shut off the water whenever I want to. This \$250.00 valuation based on sales of land was land where they had Government water rights and those lands were the highest priced lands I have known to be sold. I am basing my price on the sales of land that had Government water rights attached. If I had a Government water right I could sell my farm for \$250.00 an acre, but if you had gone in and dug a ditch through it I could not sell it for that. I am standing that difference. That is, I find from the damage the spoil bank does to it. The total value of my damage if I am damaged at all is the value of the water right and the damage for the spoil bank.

H. S. RIDGELY, called by defendants, testified:

My name is H. S. Ridgely. I am a lawyer and live at Cheyenne, Wyoming. I was United States Attorney for about 2 years. I am well acquainted with Powell Flats and know where Bitter Creek is located. I used to live at Cody, Wyoming, and was attorney and general manager of Colonel Cody's interests. He at one time had a segregation on Cody's Flats with Colonel Salisbury and that was part of the holding of Colonel Cody when he first went to the town of Cody. They later released it to the Government either in 1903 or 1904. I was all over the Flats many times. In the Fall of 1902 I hunted antelope on this bench and we planted out some willows near Powell. We put a flag up on those willows to attract some antelope on the Flat. There were some willows at some place North of Powell sometimes. That was in the Fall of 1902. I have been across the Flats many times and along the creek. In the month of March, 1906, there was a robbery at Cody. A couple of fellows stopped a man named Johnson, a close friend of mine. Hunter, a Deputy Sheriff, and I followed these fellows and they went out across from Ralston, turning across
444 the Powell Flats towards Garland. At that time there was no one on the Flats, nothing but a box car house. These fellows cut across and went past this house, and then went to Bitter Creek and we followed them down the creek. There was water running in the creek from melting

snow. We followed them and captured them near the town of Garland. In the campaign of 1914 I canvassed over the Flats and the seepage made quite a stream out of it. The first time I was on Bitter Creek where the willows were was when I was hunting. There was no water in the creek at that time. That was in the Fall of the year and the creek was dry. I have crossed it at Garland many times when the water was running down. I have been down the road from Garland to Basin and the creek ran water in the Spring time from rains and snows. I could not say how frequently or for how long a time I have seen the water run in the creek in the Spring, but it was a dry water course that drains the Powell Flats and the surrounding hill or elevation that comes down from the upper Flats there so long as there was any snow or rain. It drained that country there. I would not say that two-thirds of the time I was there I saw water running down that creek, but I would say that the stream had water running in it possibly two or three months in the Spring time. It dried up in the Summer time because it had no source of water except the snow and rains.

ARTHUR W. IDE, called by defendants, testified:

My name is Arthur W. Ide. I am a farmer and live about three miles North and East of Powell. Have lived there 5 years. I located there when I first came to the State. I attended an engineering school. I studied three years at the University of Illinois. I drew this map marked Defendants' Exhibit O. It is drawn on the scale of 12 inches to the mile. It is practically a correct map of the school section and the creek. There are things in the map a
445 little off, but all important places are correct, I think.
(Defendants' Exhibit O offered in evidence. No objection.)

I know where Mr. Caldwell's land is located and also where my land is located.

I am familiar with Bitter Creek. I have been over the entire course of the creek. The North branch of it rises up near the foot-hills at the bench and flows in a Southeasterly direction to Mr. Caldwell's school section and there it joins the South branch that originates near Ralston, and flows in a Northeasterly direction. They unite at the school section and then flow down across it almost Southeast until it hits

Garland. Then it has a more Southerly direction until it reaches the Shoshone River. The branches are about 10 or 12 feet wide, I expect wider than that where they unite, especially during the last year or so. They are at least 20 feet wide and about 10 feet deep. After these channels unite, it is about 25 feet wide. I have had occasion to measure it in quite a few places in the school section. The shallowest place I could find was 8 feet and it runs up to 12 feet at the school section. It runs through Mr. Caldwell's homestead and then into his land in the school section which belongs to his wife, then it goes through Mr. Althoff's and through a corner of Mr. Caldwell's East piece of school land and then through Thornburg's and then through my mother's and through mine and then through Harry I. Collins' just at the corner of his place. I have been familiar with this channel ever since I have been there—5 years.

The Reclamation Service deepened the creek a little through my place and widened it some. They have also dug a very large canal parallel to the creek and running for a distance of about 1500 feet from my line in a Northwesterly direction to a point about 150 feet below where Drain K empties into Bitter Creek. The old creek, the new channel and the spoil

446 bank together take up about 7 or 8 acres of land. They made a cut in two places and in one they straightened the channel out. The creek made a bend to the South and they wanted to straighten it and they made a bend to the North. It didn't straighten it. It just made another crooked bend in the opposite direction. I don't know the exact width of the spoil banks, but the creek and the spoil banks on both sides of the creek close to the side of the diversion canal measure 172 feet with a tape line. Previous to my coming there they had dug a new canal upon these lands. The Lincoln townsite diverts its water where Bitter Creek crosses the road. The Government cut a short trench about 30 or 40 feet long and then built around this Lincoln townsite headgate and back into the old channel. The purpose was to divert the water from the headgate of the Lincoln townsite. It was done sometime this Spring. The market value of my land before the Bitter Creek enlargement, and before the spoil banks were put there and before the new canal was dug was \$12,000; that would be \$150.00 an acre, but the land where the Government work was done was the best land I had and was more valuable than the rest of the place because it was better soil and lay

better and was better to work and more productive. The value was \$250.00 an acre. I should judge about 4 or 5 acres of this land was destroyed. The creek originally, I should judge, took out between 2 and 3 acres. I had a crop growing on that land. I expect the total aggregate damage to the crop that was destroyed on that land would be about \$25.00 an acre. The digging of these ditches and the throwing up of these spoil banks I would say would depreciate the market value of my entire land about 30% because it is very unsightly and takes up a good deal of land and leaves it in a bad condition. It is now impossible to mow the weeds on the side down by my place. It cuts my place in two. My place was of course originally cut in two by the creek, but the Government work now makes it more difficult for stock to get down there for water. It has left me
447 less grazing than I would have had if they had not made the creek so large because at the lower end it was possible to make a bridge without much expense and it would make me about a quarter of a mile longer haul before they put in a bridge where I had one. I know where the siphon is on my land. The creek below the open drain K is gradually deepened and widened slightly and when you get down to where the Lincoln townsite dam was about 2500 feet below that siphon it was deepened I guess between 3 and 4 feet. The effect of this deepening was that it left the settlers at the Lincoln townsite without water. It lowered the bed of the creek so that water could not be diverted into their channel without constructing a dam. They made several cut places on Mr. Caldwell's place and piled up quite a little earth. They did the same on his that they did on mine. They didn't have proper machines for straightening the creek so that the channel would bend in the opposite direction almost as badly as the original creek bent. They did not deposit the earth in the old creek as they could have done, but deposited it out on the ground and left it very unsightly. I estimate that the total amount of land destroyed on land of Mr. Caldwell and his wife was about 6 or 7 acres. I would say that the land in the school section was worth \$200.00 an acre and that on Mr. Caldwell's place it was worth about \$12000 for the 80. The effect of the spoil banks upon the market value of his tract I would say has depreciated its value about 25%. The value of the crops destroyed I would say was about \$25.00 per acre. Without any water right of any sort his land is practically valueless. The changing of the bed of Bitter Creek would

be no damage whatever on my place because the spoil banks are on land that is already wasted. It would never wash as far as outside of these banks. But on Caldwell's land it is a little different. The soil is level soil and the
448 ground seems to run straight up and down and when it washes it caves. There is no gravel there to protect it. I could estimate the loss. I have seen the banks since this change has been made and they are sloughing off pretty badly. The effect upon the land next to these banks where water would run down and stagnate near the stream would be to sour the land. I think the measure of damage would be the same as on my place. Where it is possible to cut a hole through the bank you could relieve that condition and the damage would be the expense of cutting through the banks which would be rather large because they are immense banks. I cannot estimate the cost. I believe something over \$100.00 would probably cover the damage on my place. I couldn't say what would be the expense on Mr. Caldwell's. There are two places on my land where the banks were cut through by the Government to relieve that condition. One is where my main West ditch runs into their ditch and there is quite a large bend and they cut through the bank. At several other places they didn't do it.

I am somewhat familiar with the amount of rain fall at Powell as compared with the amount of rain fall back in the foothills in the water-shed of Bitter Creek. There is a good deal more moisture up in the foothills than there is around Powell. There is very little around Powell, but up in the foothills the grass is good. There are high winds there and when there is snow practically all the snow will keep coming against the edge of this bank and settle down and cause a very large amount of snow at the edge of the bench. There is grass growing on the bench, but no grass on Powell Flats. There it is salt sage. A dry farm near Powell would be a very dry farm. I know they farm up there on the bench but I don't know what is raised. I have heard of it but have never seen it.

The first year I was here the Government turned the water in on the 10th of May; for the two years follow-
449 ing about the same time, but the last couple of years I think they turned it in about the middle of April for the sugarbeet growers. Water for the general farmers is not turned in by the Government until possibly two weeks later

than that. Before the Government began to irrigate there would be a small stream of water each year in Bitter Creek, possibly 2 or 3 second feet, sometimes 4, when the snow would be melting. If they got a rain it would run more, but there is very seldom rain so early in the year. It generally snows. I have known it to snow late in May, and as that snow melts the water runs off. The rain comes in the latter part of May or June. For the last year or two there has been rain from May up until August. There is a drain or two put in above me and the only way I can tell when rain water is coming down unless it is a very large amount is that the rain water is discolored while that coming from the drains is clear. The drain was put in I think the second year I was there. The first year it rained I think until the Government turned the irrigation water in. I know we watered our stock down there all the time. I built my corals on the creek. This photograph, Defendants' exhibit P., was taken at the siphon mentioned in the testimony. It shows that the creek was deepened very little, and shows what a small channel the Government left there to carry off the water that came from above. This is a sufficient channel to carry all the water. It will take care of all the water that will get down.

This photograph, Defendants' Exhibit R, was taken with the camera sitting in the bed of the creek a little East of the outlet of Drain K, and the point where I am standing is right near the outlet of a cut-off in the creek shown in the photograph. I am standing where the original creek bed was before it was deepened.

This photograph, Defendants' Exhibit S, shows me standing in the same position as the last photograph and is
450 the outlet of the cut-off and shows the creek at this point deepened not to exceed 6 or 8 inches. The cut-off shows the original depth of the creek, although it has some ice and snow in it, and does not show the bottom of the cut-off.

This photograph, Defendants' Exhibit T, was taken practically across from the outlet of Drain K, and shows the headgate of the new diversion canal and also shows the sides of the excavation.

This photograph, Defendants' Exhibit U, shows the two headgates in the creek. The one on the left is the headgate of the new diversion canal and the water is flowing in the

channel of Bitter Creek. It shows the distance water will have to be raised in order to start water down the channel of the new canal. It will have to be raised at least a foot and I think a good deal more than that to start the water and then if the water runs to a depth of 2 feet and a half it would probably be deeper than that right at the point where it is diverted because water will kind of drop off behind a gate.

This photograph, Defendants' Exhibit V, shows the size of the excavation of the new channel and a section of the canal at the deepest point near the headgate. It shows that there is no water running in this canal and it could not possibly act as a drain. This is practically the same grade as Bitter Creek at its deepest place, showing it would be no benefit whatever to my land.

This photograph, Defendants' Exhibit W, shows the bed of the canal much narrower at the bottom of Bitter Creek. On the left it shows excavations made in Bitter Creek itself and the two banks of the new diversion canal. It shows the rough condition [itt] was left in and the large amount of ground which is covered by these excavations.

This photograph, Defendants' Exhibit X, shows a section of the creek where the water is running out of Drain
451 K, down at the diversion canal. The camera in this picture was set level by means of levels attached to the camera. My finger is pointed at a point 2 feet 6 inches on the rod I am holding in my hand. A straight line drawn from that will indicate the height to which water will be raised at the point of Drain K when water is diverted in the new canal.

This photograph, Defendants' Exhibit Y, shows a section of the creek below Drain K, as it was before it was deepened the last time. This shows the creek was many times as large as it is at the point shown in the first photograph at the siphon and would carry many times the water that would come down at that place. It was unnecessary to enlarge the creek down here to take care of the water coming from above because it would already take care of more water than came down. This channel is partially filled with waste dirt from the channel where they made the cut above and does not show its entire width.

This photograph, Defendants' Exhibit Z, shows a section of a cut-off a mile below Drain K, and is where that cut-off comes in which I referred to in my first picture. This shows the size of the channel, the depth of the channel and also a general view of the damage to my land. It also shows that I farm my ground right up to the creek.

This photograph, Defendants' Exhibit A-1, was taken from the North bank of Bitter Creek, looking West. It shows the cut-off referred to in the last picture; also that the creek was not straightened but made an equally bad curve in the other direction. The arrow points to where I am standing on the North bank of Bitter Creek where this cut-off shows a new channel and shows the amount of damage and also the amount of fall Drain K has into this creek. It shows that the old creek bed has been deepened very little here. It had a very good outlet before it was deepened.

452 This photograph, Defendants' Exhibit Q, shows the condition of my land, the state of cultivation it is in, and also shows that for quite a distance the creek has not been deepened to any appreciable amount because there are no spoil banks there. It shows the territory near the siphon. The plowed ground is that for which I claim an allowance for seepage because of the minerals that have been left in the soil from previous seepage. I think these photographs were taken on the 12th or 13th of January this year. There is another point I want to bring out. The creek was not deepened near the ground that was seeped. A little further down this picture shows almost the beginning of the diversion canal and there is no water in the diversion canal at its deepest point, which is at the same grade as Bitter Creek, and therefore it would not in any way lower the water table on my land. (Foregoing photographs offered and admitted in evidence)

Cross-Examination.

The only damage the Government has done to my land outside of that occupied by the spoil bank is the unsightly appearance of the spoil bank. I consider the whole place has been damaged when they damage one acre. I believe that land is included and would make the improvement cost more than the rest of my land. It would be possible I think for 7 or 8 acres to increase the cost of the improvements on the rest of my land by 25%, besides the depreciation caused

by the [unsightlessness] of the bank. There are a few places in the bed of the creek where the water will back up and sour the land unless the creek banks are dug through to relieve that condition. That can be done. That is the only damage I have suffered. It was already cut across there. There is no trouble about my stock getting down to water where the siphon is according to the photograph, but there are other places where I do have difficulty. I have to get down to water my stock by the siphon. If this work had not been done I could water them most any place. It makes it unhandy when you are working your harrows to
453 take them apart and load them and go away up there. There is no question of water right involved in my case. It is simply the value of the land taken and the value of the crops. I have testified to the value of the land and the crops that were taken.

454 PAUL RICHTER, called by defendants, testified by deposition:

My name is Paul Richter. I am 49 years old. Live at Cody. My occupation, wool grower. I have been ranging sheep near Powell since 1901. I am familiar with the part of Bitter Creek from Garland up to the head of it probably North of Ralston. It has many branches. There is one more branch to the left of the road that was in those days running from Garland over to the Silver Tip coal mine. That branch would have probably come into the other from 2 to 4 miles above Garland on the land I think now owned by Mr. Caldwell. The channel before 1907 I think was about from 4 to 10 feet wide and from about 3 to 10 feet deep. I don't know exactly what were the lands that were settled up. When they began to settle it up we had to stay away with the sheep. What I know about Bitter Creek is what I saw before the Reclamation took charge. Bitter Creek was about 6 or 7 miles long from the prongs up to the head of the West prong, and probably about 4 miles from the mouth of the East prong over to the bench. The land was level and it had a well-defined channel. Water ran in Bitter Creek when I knew it. We used to get January thaws and then all the water would come down from the bench. After that we would get more snow somewhere in March. The time the snow disappeared depended upon the amount of snow fall. I remember one year, I think it was close to the first of

May before the snow went. That is, there was some snow banks then on the edge of the bench. I seen it plumb full of water, and have seen the banks run over. I remember we had 3 or 4 days of rain and everything was overflowing. I did not remain down near Bitter Creek. I had to come over to the mountains and back again. Whenever we got snow I came back on the range here. There is always more
455 snow on the bench than there is below. The grass shows that there is more water fall on the bench than at Powell. I have noticed the clouds seem to go over the bench towards the Pryor Mountains. I know several little springs on the edge of the bench that run whenever the snow goes. After that they dry up. They called it Bitter Creek when I came over here and it has been so called ever since. My testimony is about the conditions prior to 1907.

Cross-Examination.

I have been in the sheep business. I ranged in the Winter time and Spring and later I went over the mountains to the Northwest of Cody. I had one, two or three bunches of sheep. I was not herding sheep myself on the Powell Flat. I had a man doing it. I tended the calves. My calves were any place where we found water and feed. We found salt sage, but no grass on Powell Flat. I don't know whether there was enough rain-fall to raise grasses there or not, but no grass grew there. I don't know whether they had rain-fall here in Summer or not because I left here before the first of May and camped in the mountains. I know nothing about any rain-fall here from the first of May to December. I know where the channel of Bitter Creek was when I camped here. It is just where it is yet. The channel was well-defined. On the one that I seen there was sage-brush and coarse grass. I don't think it ever did change. That is true of all the dry gulches in the country. There are no springs on the Powell Flat that would form a source for Bitter Creek. There are some springs on the edge of the bench. I never heard the names. The biggest one, I think, was Govey Spring. The last time I seen it they cleaned it out and I should indee there was a pool almost the size of a well. When I seen it there was not enough water so it would run out. The water ran out from it as far as I can remember from two to four hundred yards. The spring must have been located from three to four hun-

dred yards from Bitter Creek but it never reached
456 Bitter Creek.

The substance of my observation is that when there was snow and it was melting there would be some water in Bitter Creek. We don't have much rain in the Winter, but do sometimes in the Spring. I have seen the time when we had 3 feet and a half of snow on the level. I don't know anything about the rain fall upon the Powell Flats or this bench. The rain fall taken the whole year through is light. The snows in this country have been some years very slight. I have observed the water in Bitter Creek up until the first of May, but never after that time because I left the Flats about the first of May. I could not specify that I saw Bitter Creek in the year 1905, or 1906 or 1907. When the settlers came we stayed back with the sheep. I don't know exactly when the settlers came, so I could not specify any years. The part of Bitter Creek I noticed was from Garland up towards the head of it. I should judge it would probably be from the road that goes around Powell to Silver Tip. About three miles further West there is water where we used this range in the Spring. Silver Tip is a coal mine located almost directly North of Garland and a little West. I should judge 7 or 8 miles West of Garland. I did not have my sheep there but I was all over the Flat. We made our camp near some water holes. We used to hang around water holes. Later on we moved towards Bitter Creek because we always found water in there. There were water holes and at times water was running. The waters from melting snows would collect at low places and stay for some time because there was no outlet. I found snow water in Bitter Creek above Caldwell's school section every year at different times in the Spring up to the first of May. It would not flow down constantly but it would after a rain storm. It would continue to flow after a big rain storm probably about 2 or 3 days. When the snow had finished melting, which would be prior to the first of May, there would be no water running in Bitter Creek. I seen water actually running in
457 that stream for weeks, maybe for a month, when we had snow on the bench and the snow melts during the day time and stops when it gets cold during the night. Just as soon as the snow stops melting the water in the stream would stop flowing. I have seen the North branch of Bitter Creek above Caldwell's place at times full. I seen it in February on the South side; when we get a nice warm day there

is a lot; if it is not very nice there is little. The snow mostly starts melting in February and keeps going until it is all gone. It takes a little longer than a month. The snow is not generally gone by the first of March, but if it should be gone, we always get snow afterwards. I seen snow here right close to the first of May. In some years it might be gone before. I would not attempt to estimate the amount of water I have seen flowing in this stream below Caldwell's place. I have seen it run 4 or 5 days after a heavy rain. From a short shower it runs about a day.

J. M. BEATTY, called by defendants, testified by deposition:

My name is J. W. Beatty. I am a farmer and live 1 mile from Clark postoffice in the Northwest corner of Park County. I lived in Garland from 1901 until March of the present year. I was in the mercantile business at Garland until 1912, and then I was a farmer. I have known Bitter Creek since I arrived until last March. I am not very familiar with the upper part of Bitter Creek. I know anyway two forks. One rises near the bench and another in the vicinity above Ralston. They unite about due North of Powell on Mr. Caldwell's land, I believe in the school section. It is a natural water course. Its channel is what I would call a well-defined channel or gulch from 3 to 10 feet wide on the bottom and from 18 to 30 feet wide on top, from 3 to 10 feet deep. From the union of its two forks

458 to the mouth it is about 9 miles long. The North Fork is $3\frac{1}{2}$ to 4 miles long. The West fork is about a mile longer. It drains the entire Garland Flat of approximately 35 to 40 miles. Flood water flowed from 1900 to 1907 or 1908. I have seen water practically several months from January. The water began to flow in Bitter Creek from the first thaw in Spring, sometimes in January and any time from then until the first of May. I have seen it run in June. The volume flowing in the creek was not continuous. I have seen from one to a thousand feet down the creek. The snow disappears off from the bench from April 1 to the 5th of May. I have seen water run in Bitter Creek in the Summertime. If the water from Bitter Creek were reservoired it would irrigate from two to five thousand acres, but it is hard to make an estimate. The embankment built by the railroad at Garland in 1902 was about 160 feet long at that time and about 8 feet high and about 4 feet wide on top. It was built to divert the water in flood

times and send it down through the bridge. A number of times it would be up to overflowing and run into the yards. I saw it up against the embankment several times. I never saw the embankment threatened but once in 1907. I saw it run over there in the Fall of 1901. Since then I think I have seen it twice practically as high.

Garland townsite secures water to irrigate its lands out of Bitter Creek at a place about a mile and a half Southeast of Garland. They constructed a ditch and a dam in the channel of Bitter Creek. They raised I believe wheat, oats and alfalfa for five years prior to this year. It is productive land. The land without water as grazing land is worth from \$2.50 to \$5.00 an acre.

There is more rain fall on the bench than at Garland because the vegetation is greater on the bench. There is also more snow there in the Winter than at Garland. We
459 had to shovel out snow last week on the upper end of the bench when the Flat here was practically bare. The clouds come up over Hart Mountain and then break and pass around on each side of the valley.

I am familiar with one or two Government drains. One comes into Bitter Creek just below the bridge at Garland. Another one runs through Mr. Wilkins' place and comes up on that other place, adjoining Bitter Creek about one mile and a half from Garland almost West. I have never seen any effort made to conserve this waste. I probably never got up above Bitter Creek before 1907 to exceed a half a dozen times in the entire 6 or 7 years.

Cross Examination.

I came to Powell Flat in the latter part of August, 1901, and located at Garland in the mercantile business. I continued in the mercantile business until 1912. I maintained my farm until this Spring. During this time I have had opportunities to examine the lower portion of Bitter Creek in the immediate vicinity of Garland. I visited the upper forks of Bitter Creek probably 6 or 7 times between 1901 and 1907. These forks I visited come together about 4 miles North of Powell near Caldwell's school section. I also visited all along the branches. That is, I crossed them. I know nothing about the sources but I have been all over the entire Flat. I have been to the source of this stream which is the break which drains into Alkali Creek beyond the ridge.

Alkali Creek drains a portion of this Flat. It flows into Shoshone River Southwest of here somewhere. Alkali Creek is like all streams in arid countries. It is a dry wash 7 or 8 months in the year. It is a good deal bigger stream than Bitter Creek. It drains a very little of the upper portion of what is known as Powell Flat.

I have been to the upper branch of Bitter Creek. The source consists of nothing only a gulch which comes
460 down over the bench which fills with snow which melts and runs down. There is hundreds of those little gulches radiating and forming larger gulches. The only source of this branch of Bitter Creek is the melting snow; that is, on the bench and all over the Flat. The greater part of the bench drains Southward. When the snow is melted there is no source to the North branch of Bitter Creek. The snow will sometimes last until nearly the first of May, but that would be an extreme year. The snow is generally gone between the first and 15th of April. From then on there is no water in Bitter Creek from melting snow. It takes from one to four days for the water to run off from Bitter Creek; after the snow is gone the water comes from storms of rain we have over the Flats.

We do not have many rain storms. It frequently goes several weeks at a time without rain. If a sufficient rain comes the surface water runs into the lower depressions. The ground is a sort of adobe and rain water slips over it pretty easily. It would take a considerable rain fall in the Summer time to put any appreciable water in Bitter Creek. The ordinary shower would not bring much water, but it would bring some. I have seen water in Bitter Creek in June resulting from a storm. I don't mean to say that it came from any permanent source. The same thing is true regarding the upper branch of Bitter Creek. My business was not such as to call my special attention to Bitter Creek, but we used to freight out there and we had to ford every wash that would come down and we would get stuck. I have been over there several times, boarded right on the bank of the creek. I just happened to be around Bitter Creek above Caldwell's casually when I noticed its condition. There has been no effort made to store any surface water or flood water of Bitter Creek. You could not depend upon water in Bitter Creek for irrigation after
461 the first of May. There is no water there after the

first of May except when there is a rain storm. I can't say whether there is any way to store the flood water of Bitter Creek. I don't know of any natural reservoir site.

CHARLES A. MARSTROM, called by defendants, testified by deposition:

My name is Charles A. Marstrom. I live near Cody. My occupation is not much of anything right now. I have never lived in or near Powell. I have never conducted business in this part of the country. I know the creek that is now known as Bitter Creek. I am 63 years old. When I knew the channel now known as Bitter Creek I was riding on the round-ups in the years 1885, 1886 and 1887. Bitter Creek rises at the very Southeast end of the Big Bench. It drained all that territory of foot-hills lying West of it. It runs sort of Northeast across the Flat. It has two main branches. One branch heads clear across the Flat quite a few miles, and the other from the West is shorter, 3 or 4 miles. [The] unite at the old Meeteetse Road. I could not tell you how far that is from Powell—it is not very far from where the raise starts out here North. From where the branches unite Bitter Creek extends Northerly. That is, I guess, about 10 miles from where it flows into the Shoshone River.

Bitter Creek has a well-defined channel. It has just ordinary banks, in places 35 feet wide, and then probably deep enough so that when a cow is standing in it, you could just see its back. Water was running in that channel in the early part of the year from March to June. At times a good deal; at other times a little; nearly always enough water to water the stock at places. The water came from the melting snow at the edge of the Big Bench, and later from rains. If they could have saved all that water 462 they could have irrigated a good deal of land. It snowed more on the Bench than at Powell. There is always grass up there. Down here there is just salt sage. It also rains more on the bench than at Powell.

Cross-Examination.

The last time I saw Bitter Creek was probably in 1907 or 1908. I could not recognize it since Powell Flat was taken up. Our cattle range was what is known as Trail

Creek. The only cause I had to observe Bitter Creek would be on those occasions when I came up to run our cattle, or in the Spring, or sometimes in the Fall; we had to ride all over Bitter Creek and would cross it in different places. I never saw water running in Bitter Creek after the Spring of the year except immediately after a storm. It would be only at those times when the water would run from its source to the river. I have seen a cloud-burst in 30 minutes time that would make Bitter Creek almost a good sized river. A cloud-burst sometimes makes a good sized river out of the streets in a town. I don't know Caldwell's school section, but I have seen from 8 to 10 inches of water run in the creek where the road crosses it. I cannot tell you where it crosses it. It was the road from Meeteetse and Corbett to Billings. I remember particularly seeing that water in the Spring of 1887 along in March when the snows were melting. I could not say whether or not that water continued to run for any certain period of time. The observations I made were when I was engaged in the round-up and in camring. We generally found water in holes. It was nowhere flowing in Bitter Creek in the Summer time except after a rain. There were not many depressions in Bitter Creek on Powell Flats where the rain would collect. It would be only in deep holes. I don't remember of ever seeing water running in Bitter Creek except in the Spring but I have seen water in the holes every month in the year. Water would stay in these deep holes from rain storms.

Re-Direct Examination.

463 The water I described came into the branches of Bitter Creek before they united.

CHARLES A. DAVIS, called by defendants, testified by deposition:

My name is Charles A. Davis. I live at Penrose, Park County, Wyoming, about 7 miles from Powell. I am 39 years old and a farmer. I have lived 6 years in Penrose. Before that I lived at Garland. I came to Garland in 1901, and lived there until about 1911 or 1912. My occupation at Garland was running stock; part of the time I was in the livery business. I lived about 100 yards from Bitter Creek. I am familiar with the channel of Bitter Creek. It has its source along what we call the Silver Tip Bench North and

West of here about 4 or 6 miles. Silver Tip Bench is a big level tract of land. There is a foot-hill on the side of the bench. There are two main branches to Bitter Creek. One branch runs a little Northeast and the other one runs Southeast. The South branch is about 4 miles long and the North branch about 3 miles long. They have well-defined channels, up near the bench about 3 feet deep. As they run down they get deeper and wider. They unite at Caldwell's school section. From there it runs through what is known as Garland Flat into the Shoshone River. It must be 6 or 8 miles from where they unite to the Shoshone River.

I have seen water in Bitter Creek almost any time of the year except in the Winter during the cold weather. I have seen running water nearly any month during the Summer. The first water we would notice would be from the January thaw. Then again about the first of March. It would flow then possibly until about the first of May, depending upon the season and the snow. That was the condition in 1901 and as long as I have been in the country.

The channel below where the branches unite is well-
464 defined and varies from 8 to 10 feet deep and probably from 6 to 10 feet wide. At a bend it would be 20 feet wide. I have seen this channel sometimes several times a day. It had water in it at times other than when the snow was melting because we had lots of rains. I have seen it plumb full of water. There is one spring up at Silver Tip Bench that flows a little in the early Spring when the snow is melting, but would not reach down to the creek, only when joined with melting snow. I have seen water in that creek in the month of July after a heavy rain when the creek was full. I don't know what year; I don't know as there was ever a year that water was not there in June or July. Sometimes it would flow two or three days and sometimes a week.

I am familiar with the foothills. There is considerable more rain fall in the foothills than at Powell, because lots of times I got wet riding across the foothills and down here the ground would be perfectly dry. I have also saw rain pass over there that would not reach here. There is more grass there than here. I know they dry-farmed on the bench. I was at Govey's place when he had fine potatoes. Govey's place is Northwest of the head of Bitter Creek, on the bench. We cannot raise potatoes down here by dry farming. Lots of times lots of snow falls up there when there

is not any here. The snow is not there continually but just in the Winter from October to May. I don't know whether there is any snow up there now or not. I have not been up there. The snow usually disappears from the bench along in March and April. I have saw it there as late as May. The amount of water which I have seen run down Bitter Creek in one week in the spring would in my opinion irrigate the whole of this Flat for one crop.

I am familiar with Mr. Caldwell's land. I am somewhat familiar with the local value of land in this section. I know what land has sold for around here. I have seen the
465 embankments and ditches where Bitter Creek was enlarged on Mr. Caldwell's land. I am familiar with the school section. I know pretty much what part he owns. I have seen the embankment there. It would have a great effect with me, in decreasing the market value of the land, because the old embankment has been cut away and left new earth there for the flood water to work on, which would cut it very rapidly. The banks would wash away and cave in. I think they will have to keep rip-rapping it to keep it from cutting. There is nothing to prevent it from washing the fresh dirt, and it is likely to spread and enlarge the bed of Bitter Creek and cut the land away. I have seen more water in Bitter Creek before the Reclamation Service began to irrigate their land here than I have since.

Cross-Examination.

I lived on this Flat about 1901. My occupation was riding. I did not have a homestead. I don't know whether or not there was ever a water right application made on Bitter Creek until after the Reclamation Service began reclaiming the Flat. People were not grabbing up water in those days. They didn't have to take up a homestead on Bitter Creek for the purpose of getting the water holes. It was all open. They couldn't do it. I tried to get a homestead but I understood Mr. Cody had it and it was under his hand. There was enough water coming down the creek to irrigate all this Flat. The little springs that fed Bitter Creek were full depending on where the storm hit. It frequently happens that water is in dry washes that never gets into Bitter Creek. Those on the South side of the Divide run into another stream. I don't know when they first named Bitter Creek. It was always called Bitter Creek since I was here. There is no permanent source to Bitter Creek

except melting snows and rain. There is no outlet from any lake or other reservoir. There are no living streams that supply it as a source. There is one spring, however, that runs into Bitter Creek in the Spring of the year. It 466 runs all the time, but not very far. It does not run into Bitter Creek now. It is called the head of Bitter Creek spring and is located up under the bench.

I was over Bitter Creek in those years I mentioned lots of times every day on almost any part of it at any time of the year. I rode up and down Bitter Creek throughout the year nearly every day looking after stock to see that they didn't stray away. They were on the bench and on the creek backwards and forwards depending on the weather. There is a spring lower down on Bitter Creek below Garland. Above Garland and past Caldwell's ranch the water which comes down in the Summer time is from rains.

WILLIAM WOODRUFF, called by defendants, testified by deposition:

My name is William Woodruff. I live part of the time in Cody and part of the time in Powell. My present home is in Powell. I have been in this vicinity since 1904. When I first came here I was camp tender for the Bennet Creek Company. I worked for them about 7 years, between Garland and Bear Tooth Lake. Bear Tooth Lake is West of here about 50 miles. After that I worked for the Hart Mountain Live Stock Company for about 7 years. Since then I have been in the sheep business with Paul Richter. When I worked for the Bennet Creek Sheep Company as camp tender and for the Hart Mountain Live Stock Company I had sheep under my charge. The sheep ranged in the Fall and Winter on what is known as Garland Bench or the Big Bench; also on Bitter Creek, Pole Cat, Silver Tip, San Coulee and Alkali Creeks. We [staid] on Bitter Creek at various times from December to about the first of May and even up to June the last two years.

I am familiar with the course of Bitter Creek. It rises 467 on the South and East side of the bench known as Garland or Big Bench West and North of here. Bitter Creek has a good many branches. Its main North branch rises about 8 miles North and West of here. It unites with the other main branch about 2 miles East of here. The North branch, I should judge, is about 8 or 9 miles long.

The other branch rises West of Powell's about 9 miles, I should judge. These branches have well-defined channels. They vary from 3 to 8 feet in depth. They vary in width about the same amount, I should judge, at places even wider, maybe 20 feet. After they unite, they flow into Shoshone River about 7 or 8 miles off. Am familiar with the stream only to Garland. From where the two branches unite down to Garland, I should judge the channel to be about 20 feet wide and probably 3 to 8 feet deep. I consider it a natural water course. The channel is made by the water itself. I have known about that channel being there since 1904. I am to some extent familiar with the amount of water that runs down that channel. I have saw water there from anywhere in January up to the first of June. It varies from just barely running water up to bank full. I saw water there every year except two Springs I wasn't here. One of those times was before 1907. I saw water every year I was over here in the Spring. While it was thawing weather there was running water. I don't remember about irrigation, but the water I saw coming down each year would, I judge, irrigate a couple of sections if used right. It comes from the bench mostly from snow and some rain. There is considerably more snow fall on the bench than at Powell. The winds, as a rule, blow from Northwest and West. A large percentage of the snow is drifted from the South and East side of the bench, making a greater snow fall on this side. We lambd on the upper end of the bench for two years. We had reservoirs and dams and also a well to water our sheep. For the last two years we watered them from snow on the East end of the bench. There was a spring
469 up there North and West of here known as the Henry Hart spring which goes into the North branch of Bitter Creek, also the Gowey spring. Old man Herrick also has a couple of springs North and West of here. In 1913, I had sheep drown on all the creeks, but I lost about 30 head on Caldwell's place in the Spring by drowning in Bitter Creek. We left about the 15th of April on account of water. Not very much water soaks into the soil at the head of Bitter Creek. Usually a little rain starts the creek running and the water runs down. The land will not take water very easily. They claim that it is hard to get the land to take water in this part of the country, especially North and West. I know about the water standing in the road near Wright's place. They filled up a dry gulch and shortened one last Fall. Snow fell in this gulch and it drifted

full of snow from last Winter and there was water in the road all Summer. There is still water there now.

Cross-Examination.

In 1904 I went to Clark, Wyoming, and Bennett Creek about 35 miles West of here. I became familiar with Powell Flat in the Fall of 1904. I became familiar with the country because I was a camp tender. A camp tender rustles feed and water for stock. I, therefore, became familiar with Bitter Creek because I was looking for water. That was in the Fall of 1904, I think about December. I know we got a thaw and the snow went off the bench and the water was running in the creek. I did not know it was Bitter Creek at that time. It ran into the river. The water was running from some snow that had started to melt. We had a fair snow up there in December; that is, 3 or 4 inches of snow. The snow that was melting was around the rim of the bench, North and West of here. The snow naturally drifted off the bench to this side. It melted and that moved below the bench. All the water that was in the creek was
170 water coming from snow that melted from the chinook in December. There is very little of the bench that drains into Bitter Creek. The only portions of it are the breaks on this side. A wind blowing from the Northwest would drift snow on this side of the bench. I don't know how many inches of snow they had. In packed drifts of snow, it does not take many feet of snow to make an inch of water. It is almost solid ice and you can ride a horse right over it, and it takes a couple of months to melt off. The amount of water in the creek depends upon how far away these drifts are. I judge there were probably 6 feet of running water in places. I mean, I should say 6 feet deep. At the narrowest places it would be 3 feet wide and 6 feet deep. It ran for a couple of days. It just naturally went down after the big rush was over. It froze up again in a couple of weeks. I saw it down the creek to a point about North of here. The North branch was a little the biggest. I don't know what was running in the other branch. There must have been some. The North branch had got to be a good sized creek: I should think about 300 or 400 inches of water, considerably wider than deep—6 feet wide and three feet deep. There was very little more water in the creek below. It lasted probably two or three days. This was because of an unusual condition, the chinook. It all came from the drifted snow on the bench. I have seen water in

the creek often. There is water in the creek now. Lots of it drains in from the irrigation system. Since 1904 I believe, with the exception of two Springs, up to the present time I have seen water in Bitter Creek, each Spring. We have a general thaw here during March and April and up to the first of June. It takes off most of the snow on the level ground, but not from the rim of the bench very rapidly as the wind or sun doesn't hit it. It takes about 2 months to go off from the rim of the bench. The last time I was up at the ridge of the bench was yesterday. I usually
471 moved down into this country about the first of November. The last time I was at the edge of the bench before yesterday was about the 6th of June, last year. I have been running sheep up there every year since 1904 to the present time with the exception of two years. There are many washes or [coolies] running down from the breaks. They are dry and sometimes they are wet. The dry gulches are made by water. They certainly look to be. Wherever there is a depression, the water will run down to the low ground.

Re-Direct Examination.

The snow up in the foot-hills melts and packs and freezes and becomes almost solid ice and when it melts in the Spring it melts slowly.

GILFEET E. GOWEY, called by defendants testified by deposition:

My name is Gilbert E. Gowey. I live three miles Southwest from Powell. Have lived there nearly 4 years. I have lived in this section of the country since July, 1907. I first lived at Garland. I homesteaded on the bench in 1910 and took possession in 1911. I did my business in Powell and had my residence up there. I am a director of the Water Users Association and have been so about three years.

I am familiar with Bitter Creek. One part of it rises about 5 or 6 miles West of Powell and another portion 5 or 6 miles Northwest of Powell. I suppose there are two branches. The North branch is composed of several branches, —smaller ones. They come from the bench Northwest of Powell. The two main branches have well-defined channels. They unite, I think on Mr. Caldwell's land. They are about 6 to 10 feet wide and 4 to 6 feet deep, I should say. I sup-

pose the channels were caused by flood waters. I don't
472 know. I was not here. So far as I know what a natural water course is, they are natural water courses. Below where the branches unite the channel is about 5 to 8 feet deep and probably 16 to 20 feet wide. I would guess that Bitter Creek from its source to its mouth is about 15 to 20 miles long. My occupation is real estate. I have been engaged in that since July, 1907. We do not buy and sell land, but we sell on commission. I should guess I have sold about 100 or more farms in this section of the country. I am familiar with the market value of the land here. I know where the drains are located that drain the lands along Bitter Creek from Garland townsite. Most of them were located before Bitter Creek was deepened. I could not give exactly when they were constructed. They were in use and in proper condition to drain the land before Bitter Creek was deepened. I do not know the necessity for lowering the bed of Bitter Creek. I know where the siphon is located on Mr. Ide's place. The bed of Bitter Creek is not lowered immediately above that siphon. They did lower it about 40 or 50 rods above it, but I do not have the actual distance. I am familiar with the Garland townsite; also with Lot 56 in townships 55 and 56 North, Range 98 West, containing 320 acres; also, familiar with Mr. Ide's land and with Mr. Caldwell's land known as Section 36 or Lot 37 and also familiar with his homestead. I have seen the ditch that was constructed on Mr. Ide's land and the amount of earth that has been thrown out in the widening of Bitter Creek on his land. As near as I can estimate it about 6 acres of Mr. Ide's land is cut up and covered over by the deepening and widening of Bitter Creek by the construction of the Government's ditch. I mean at the present time it is worthless, but its value before it was mutilated would have been \$150.00 per acre. That is in addition to the payments due the United States on the land. I would say that the widening and deepening of this ditch on Mr. Ide's land and the
473 throwing up of these piles of earth there would decrease the market value of the rest of the tract of land about \$25 per acre. The value of the crop they destroyed there this year is \$50.00 an acre. That is on the land destroyed by the dirt. A man could put a ditch in at quite an expense so as to drain the water from backing up on his land next to this embankment and it could be cut down to about 2 acres. Mr. Ide's lands and Mr. Caldwell's lands without water are worth \$5.00 an acre, and with water \$150.00 an acre. I should think about 5 acres on Mr. Cald-

well's place in the school section has been destroyed by the construction of the ditch through the land and the straightening, deepening and widening of Bitter Creek, and the covering of land by earth thrown out from the ditch. This construction work of the Government had made these 5 acres worthless. It is pretty hard to estimate how much of his other land has been ruined by water coming down and settling next to the embankment and souring the land, but I should say about 5 acres from the way it looks. The piling up of this dirt and the cutting of that land by the Government would decrease the market value of the entire place, exclusive of the land that has been cut up and covered by dirt, by about \$25.00 an acre. I think the new construction work will cave in from the water running down there during the next few years, but how much land it would destroy I cannot say. That would depend upon the water in the creek.

The Garland townsite headgate is located on Bitter Creek about $2\frac{1}{2}$ miles West of the North side of the town. Water is secured there for the irrigation of Garland townsite for the last 3 or 4 years. Everything we raise in this country was grown on the Garland townsite lands and good results obtained. The deepening of Bitter Creek diverted the water so that it was impossible to get into the headgate for the Garland townsite ditch. It was left high and dry. The
474 Garland townsite lands without water are worth \$5.00 an acre.

Since 1910 I have been up in the country near the bench twice a week when I was not staying up there. I am familiar with the water fall there. I am familiar with the water fall at Powell. I think twice as much water falls on the bench as at Powell. I think this because of the nature of the crops that grow and the nature of the grass without irrigation. I have raised wheat, oats and flax on the bench without irrigation. I have raised as high as 25 bushels of oats to the acre; 14 bushels of wheat one year and 11 bushels of wheat another year. I would estimate I raised 7 or 8 bushels of flax, per acre. I had just a little garden patch of potatoes but got ten sacks. We could not raise any of these crops at Powell without irrigation. I constructed a reservoir up on the bench for stock water and was able to impound water there. I am familiar with the amount of water that would run down Bitter Creek before the irrigation had been started by the Government. I should think that two or three sections of land could be irrigated for one crop each year with

the water that comes down Bitter Creek before you reach Caldwell's place. Being up on the bench so much and coming down so many times, I have driven out of a big heavy shower and come onto dry land. The snow is many times greater on the bench than at Powell, because many times in going there as soon as I got to the rim of the bench with my car I could not go any further on account of snow. This snow melts in the Spring. It is in compact form in the gulches and almost solid ice in many places and it melts slowly. The water sometimes begins to run from the bench towards Bitter Creek in February, but usually starts along in March and continues usually about 2 months. It is true that there was a Government lateral up there that was washed out. We had a rain this Summer that washed out Lateral A and did considerable damage. Mr. Hart has one spring up near the head of Bitter Creek, a little West
475 of North. We have three pretty nearly Northwest of here. Mr. Herrick has two or three about $1\frac{1}{2}$ miles South of ours. The water flows from these springs in the Spring of the year. They flow with the snow water down into Bitter Creek. In the Spring, for all but one since I have had any knowledge of it, there is a steady stream of water coming down from the bench into Bitter Creek. It runs about 2 months, usually the latter part of March on for a couple of months. There have been heavy rains up there that do not come near Powell. The one that I mention as washing out Lateral A was one of those. These heavy rains do not usually occur more than once a year and one as heavy as that is about the heaviest. Quite often the storms come from the Southwest and they seem to hit a break on the edge of the bench. I have been around the bench many times when I drove around the South end and I have counted as many as 12 or 13 storms. The prevailing winds are from the North and West and they drift the snow in large quantities over the bench especially where we cross it, and that causes much more snow to lodge up there in those gulches than normally falls there. The land close to the bench is quite heavy and has many gullies in it and the water goes off rapidly. I have seen those gullies as many as 8 or 10 feet deep.

Cross-Examination.

I came to Garland Flat in July, 1907. I located a homestead here at that time. I was in the business of locating home-seekers. I didn't continue that business, for the Government discontinued my locating home-seekers on the Flat. They did it for nothing. When I came here in 1907 part of the Project was open to settlement and part under reservation. I first saw Bitter Creek when I first came here. The water was turned into the Government ditches and irrigation began in 1908. I did not stay here continuously from

July up until the water was turned in. I went home 476 to gather a few traps and was gone for about a month.

Otherwise I was here. I know nothing about Bitter Creek prior to 1907. In 1907 the water in Bitter Creek was only in pools. There was no running water at that time. There was no running water in Bitter Creek at any time after the snows have melted in the Spring. There was no irrigation water in Bitter Creek after the snow waters here were gone that could be used for irrigation except only when there is a rain storm. Then there would be water running down the creek. I couldn't tell you when that big storm was that I spoke about. It was in the irrigation season. I could not tell you the month nor what year nor whether this year. That storm was Northwest of here. I couldn't say whether it was in September or in July. I think it was in June. I think they had a big rain here in September on the Flat. I don't know whether or not the only other rain storm during the year was in July. They do not often have rains down here without it is raining on the bench. It is a fact, however, that it does rain here when it does not rain up on the bench.

I had a homestead up on the bench. It was not located [with in] the range area of Bitter Creek, but about half a mile away. The waters up there where my farm is drain in a different direction. The bench is about 400 feet higher than the Flat. The fall is very abrupt coming down on the edge of the bench until you get to the Flat. It is quite steep there. When I testified about the location of the drainage canals, I meant about the time when they were constructed and put into operation and not when they were planned or located. I did state that I did not know why Bitter Creek was deepened. As a matter of fact, I do not know now. I do not know whether it was for the purpose of carrying off drain water. I have taken considerable interest in the drainage

system. I have made some speeches about it at the meetings they had. I did not say at a Water Users Association at the Powell office on June 7, 1918, that I 477 advocated the deepening of Bitter Creek as a drainage channel. I did not know when I testified here a moment ago that the object of deepening Bitter Creek was to make it a drainage channel, below the drain. They contemplate putting in more drains.

I saw the crop on Mr. Ide's land that was covered by the dirt removed from the creek. It was alfalfa. I estimated that the one year's crop of alfalfa amounted to \$50.00. I estimated about 3 tons. The value of the alfalfa was what I estimated would be its selling price. Counting out the expense of handling, I would say the net value of the crop was \$25.00 an acre because we are renting land here at one-half.

I did not notice seepage on Caldwell's land, but on Ide's land I noticed some land injured by seepage, I think about 5 acres. I saw no boggy land on Caldwell's farm, except what had been done by this construction work, and I do not know that it will injure it permanently. I do not know how much of it was seeped or how long it has been seeped. I think that if this drain channel had been properly constructed it would have been a benefit to the lands owned by Caldwell and Ide. There is a good deal wrong in the construction of these canals. On Mr. Ide's land they jumped over the siphon and left an obstruction in the bottom of the ditch. That was wrong because usually a drainage ditch does not want any obstruction in the bottom, so my objection is that in one place in this canal on Ide's land an obstruction has been left, but I do not say that the canal is useless as a drainage canal. I mean there is an obstruction to the canal and you can't get best results if you have an obstruction. They went up through Mr. Caldwell's land with an outrageous ditch. Where they went to straighten the ditch they took a crook the other way nearly as 478 bad, but not quite, and out into some clay banks where it will wash. It is good as a drainage canal. They did not make it worse than it was. This is enough I guess about the way the ditches were constructed. It is all I wish to get on record. I did not say that these drainage canals will be of no benefit to this land. The benefit will be so small that it will amount to practically nothing and I base my judgment and belief on what I have stated here in this examination.

Re-Direct Examination.

I know where Bitter Creek flows through Mr. Caldwell's homestead, where it has been widened and deepened, and have seen the embankments that are thrown out there. The effect it will have upon the market value will reduce it about \$25.00 per acre. The value of that land with water on it and without these embankments is \$150 per acre.

Re-Cross Examination.

My estimate of \$5.00 per acre without water is based upon the fact that the land is worth something for grazing purposes. That would be the main thing.

IRA A. GODDARD, called by defendants, testified by deposition:

My name is Ira A. Goddard. I live at Reed Point, Montana. I moved my family about one mile North from Powell on the 10th day of October, 1907, and lived there until February 5, 1917. My occupation before the Government ditch was in operation was working for the Government helping to build some ditches. After the water was turned in I began to farm. I am somewhat familiar with the course of Bitter Creek. I think I know where it rises. It rises up here I should judge about 4 or 5 miles. We always spoke of two branches, North and South. The North branch rises 479 over toward the so-called Gowey springs. It flows about 4 miles before it unites with the South branch. The South branch [arises] about 5 miles West of here. Both branches have well-defined channels. They had these defined channels when I first saw them, and the last time I saw them. What is called the head of the channel is not very deep, probably 1 and 1½ or 2 feet deep. The distributaries coming in from both sides widen the channels out. It seemed like they had been there for a good many years before I saw them. Sage brush and grass grow along there. The first time I ever saw it was early in the Spring. I suppose these channels were made by the natural flow of water. I have been from one end of Bitter Creek to the other, having crossed and re-crossed it many times when I worked with the Government hauling tile and gravel for structures. I have seen water in this channel. The first time I ever came up here from Cody to this Flat I got a drink of water from Bitter Creek pretty close to where Bozeman's house is now.

There was water in it again when I moved up here. I watered my stock out of Bitter Creek. It was not running water at that time, the 10th of August. I watered my stock there until I got a well dug about the first of September, 1907. Bitter Creek on the school section varies in depth. In some places I should judge about 10 feet deep. I have crossed it down there when the water was up and I have seen it about 30 feet wide where we crossed. The water ran most generally after a good rain and in the Spring of the year when the snow melted. Part of the time I saw water running steady. The Government made places for us to cross. Where it was too deep to cross we took a plow and plowed down the dirt into the creek and used that for a crossing. We made several of such crossings. There were no bridges then. There was water in Bitter Creek ever since

I saw it because that Winter after I came here there
480 was snow and rain that kept water in Bitter Creek.

Then that Spring the Government got water and went to irrigating. From that time to the time of turning in water there was water in the creek. If they had a reservoir to hold the water and snow that came down since I came in the country, I think it would have irrigated a thosuand acres, anyhow.

I am not much acquainted with Mr. Caldwell's school section. I worked around it. I know where it is located. I have seen the embankments that they have put there in widening Bitter Creek, and deepening it. I couldn't say how much land these embankments cover. The land where it was deepened and that covered with embankments is now absolutely useless. Were I going to buy Crldwell's place I would pass it up. I would not want to look at a pile of dirt. I think it would be a detriment to the land. It would reduce the market value of his land 25% anyhow.

I know where the Government drains are located. They were locateed a long time before Bitter Creek was deepened. I do not know what was the necessity of deepening Bitter Creek unless they wanted to experiment a little like they do with a whole lot of their work. The water got away before Bitter Creek was deepened just the same as it does now to the best of my knowledge.

There is a lot more rain fall on the bench and foothills than there is around Powell because I had my calves up there on the bench every year and there is good pasture up there. The water on the bench has all to come this way. In

coming across the bench I got wet a good many times but when I got down here it would be dry. I know about the snow on the bench because I hauled coal from Silver Tip mine. There was little snow down here but the gulches were pretty near full. The first snow would blow at a pretty good blizzard. We were over there about two days before the storm quit us, but when we got back to the
481 top of the bench the snow had been blowing from the North and Northwest a little bit and cleared our road but piled snow in the road leading down from the bench and we had a hard time coming down from the hill. On the bench there was not over two inches of snow at that time. It commenced snowing again and kept on. The gulches over there were pretty deep and they were all full. I hauled coal all the Winter around town and in January sometime George Loving and I went over after coal and there came up a chinook. We had been met with wagons and transferred the coal from sleds to wagons and hauled it into town. I don't recollect what year that was. I was living then down on my homestead. The snow began to disappear about the latter part of January. There came a good thaw and filled up everything and then froze up. It must have been the first of June before the snow was off the bench and foothills. When the snow was deep up there there was just a little bit of snow around Powell, just enough to make sledding good, probably 5 or 6 inches deep. I know they were dry farming on the bench, but I don't know how they succeeded. I was up there looking after cattle the latter part of June and someone Northeast had nice looking oats, and we passed one place that had wheat in. I don't think it would be possible to dry farm down here near Powell. The Railroad Company I am told constructed an embankment 5 or 6 feet high and probably 500 feet long. Ever since that the water in the stream near the embankment is level full.

Cross-Examination.

I moved my family to this Flat about October 10, 1907. I was here in the Spring of 1907 for two days. I don't know anything about Bitter Creek prior to that time. In the Spring of 1900 I came pretty near seeing all of Bitter Creek. I got a drink of water just Northwest of here and then we commenced hunting some place to eat. We branched off and walked on over the country to Garland and got
482 our lunch and stayed there that night. That was probably in May, 1907. There was no running water in

Bitter Creek then. The water we got to drink was in pools. The Reclamation Service was just beginning to cut their ditches in 1907. I watered my stock from Bitter Creek that Spring but there was no running water. The only running water in the creek in the Spring is when the snow melts or after a rain.

I don't know how many square miles of the bench are included in the water shed of Bitter Creek. Snow blows over the bench and fills the gulches on this side. I don't know how much land on the top of the bench is tributary to Bitter Creek. I would say there was all of 30 square miles drained by Bitter Creek above Caldwell's school section, but that is only an estimate. There would be no difficulty in measuring it. My estimate of 1,000 acres of land that could be irrigated was on the supposition of a reservoir which could collect the melting snow during the Spring, but there has never been any reservoir constructed and I couldn't say whether there is a place for such a reservoir for the irrigation of Caldwell's land, but I am not an engineer or an expert in that line. Anyway that Spring we had plenty of water in Bitter Creek to irrigate. In the Spring of 1907 there was no running water in Bitter Creek.

A. A. KEYSER, called by defendants, testified by deposition:

My name is A. A. Keyser. I live at Powell and am 67 years old. I have lived at Powell 10 years. I am a farmer. I am in a way acquainted with the market value of land in this section of the country. I have been farming here about

10 years. I am acquainted with the land of Mr. Ide
483 and Mr. Caldwell. In my opinion the market value of

Mr. Ide's land before Bitter Creek was enlarged and the dirt thrown up on his land was about \$200.00 an acre. For agricultural purposes it is worthless without water. Between 5 and 6 acres of his land was used in constructing these ditches and the enlargement of Bitter Creek, and making the embankments thrown out of the creek and ditch. Those 5 or 6 acres are now valueless. This work depreciated the value of the rest of the farm I should say from 30 to 35 per cent. The value of the crops that could be raised upon these 5 or 6 acres so cut up and covered by these embankments would depend upon what crop it was. The stand of alfalfa as shown upon Mr. Ide's ground looked as if it ought to yield between 4 and 5 tons to the acre with 3 cuttings.

The present value of alfalfa is from \$17.00 to \$19.00 a ton during the Summer months.

The water accumulating on Mr. Ide's land next to the embankment would have a very bad effect. The land would become sour where the water would accumulate and soak in. He would not be able to raise crops on it. That soured area would increase every year without an outlet for the irrigation water. By next year it might extend a couple of rods away from the bank back into the field and in my opinion the soured land would continue to increase year after year. The amount that would be soured during the next 5 or 6 years would depend a good deal upon the character of the soil, whether it would work back into the ditch or back up to the land. It would be very hard for me to say anything about it without knowing the character of the subsoil. New banks of a creek or ditch naturally cave in from the elements and with the pressure of large banks on there when it is thawing it would naturally keep slipping in. I don't believe I could estimate how much land would slip in during the next 5 or 6 years.

484 I have been over Mr. Caldwell's land and know where Bitter Creek was enlarged and deepened on his land. To my best judgment 3 or 4 acres of his land are destroyed by being cut up and covered with earth thrown up from the ditch and from Bitter Creek. I have noticed that in some places the earth instead of being left right near the creek and near the bank is taken over some distance and thrown out on land away from the banks of the stream, and that an unnecessary amount of land was destroyed in that way. I have also noticed the way the excavating was done in the wet spots. Here the dirt was piled up and it would slip out. That is, instead of remaining piled up high, it would slip out. I would consider Mr. Caldwell's land worth \$200.00 an acre before the Reclamation Service made these changes. The 3 or 4 acres mentioned after the Government had deepened and enlarged the creek are now valueless. The embankment thrown up would diminish the market value of the remainder of Mr. Ide's land, I would say, from 20% to 25%. It is hard for me to estimate the acreage of Mr. Caldwell's land that will be soured because of these embankments. It is not a continuous bank of earth. I judge after the first year where the water would lie along these embankments without any outlet it would gather for a width of a rod and in places two rods out from the bank, but I could not

estimate the number of acres on account of the irregularities of the bank. I would estimate that about an acre of Mr. Caldwell's land would cave in during the next 5 years because of the new banks being cut.

I know where the drains have been put in by the Government. I could not see any necessity for doing it. The bottom of the old creek was lower than the mouths of the drains, but the creek was lowered after that. The place where the Garland townsite gets water from Bitter Creek has been pointed out to me. I never saw water diverted there. It is a flume or box partially imbedded in the dirt. [I] was 3 or 4 feet wide above the level of the water when I saw it. It would not be possible to get water out there in the flume or headgate of the Garland Ditch without the bed was lowered unless an obstacle of some kind was placed to back the water up.

By observation I am familiar with the rain fall in the hills as compared with that near Powell. I should judge about twice as many storms come on the rim of the bench around Hart Mountain and down to the river North of Garland and West of Garland as we have at Powell. I think this by seeing the storms passing around that way. I have compared the verdure on the bench with that around Powell and the only green spot I ever saw when I came here was near the rim of the bench and that would indicate moisture.

Cross-Examination.

My knowledge of the comparative rain fall on the bench and at Powell is only by observation and seeing the greater number of storms passing around Hart Mountain. I think that those storms furnish water to the drainage of Bitter Creek from the fact that the rain fall obstructs our view of the edge of the bench. It also rains down here when it doesn't rain up there. I have not compared the number of times. My attention is always called the other way, especially when we are out in the fields haying. Then we do not want rain here. I cannot say about seeped land on Caldwell's school section, but on his homestead it is bad, showing a great deal of alkali and alkali weeds. Those lands would have to be drained in order to redeem them. I don't know how much it would cost. I do not know whether that land is taxed the same as the balance of our lands. If it is I would not be able to deduct anything on account of the cost of drainage in my estimate of the value of the land. I would

not change my valuation of his land under our method of raising money for drainage. I am speaking particularly about his homestead. I do not know what methods
486 there are for getting money to drain school lands. If no method is provided for raising money for draining the school section and that cost would have to fall upon the owner of the land, then in estimating the value of the land from an agricultural standpoint, I would not deduct the expense of draining it. The land is worth what it is able to produce. I do not know that any part of the school section is boggy. Every acre ought to stand upon its own bottom in drainage. I can't form any estimate of what it will cost to drain it. My observation of Bitter Creek in seeped districts is that it does not drain the land right up to it. I have seen it boggy within 10 feet of the bank. Of course if it would help in draining the land it would be a benefit to it. I do not consider Bitter Creek a drainage channel. It is a drainage channel for surface waters but not for drainage purposes. I do not know where there is a better place for drainage purposes than Bitter Creek. I do not know anything about drainage. It may be possible that Bitter Creek is a natural place to build a trunk canal for carrying off the drainage waters of the Flat but I do not know the first thing about drainage.

The value of the farm is lessened in a great many ways by the piling up of the dirt along the banks of the ditches. The amount of land it occupies is destroyed for agricultural purposes. The banks are unsightly and will accumulate weeds, and pride is worth something in a home. It also cuts up the area in so many ill-shaped pieces. His land is not cut up any more now than it was cut up by the creek before it was deepened, except at places the creek is widened. The unsightliness of the banks is one feature of the damage. Leaving out the ground actually covered with dirt and the ground that might get sour, the remainder of the tract is not affected in its value as agricultural land or in its market value except by the unsightliness of the banks, and I would estimate that the remaining agricultural lands for
487 these causes have been depreciated in value about 20% to 25%.

Re-Direct Examination.

The appearance of the banks disfigures the land to a great extent. If a man came in here from Iowa or Nebraska to purchase a piece of land and saw that piece of land or one that was similar it would make a great impression upon the average home seeker who wants a nice farm and to a certain extent it would kill the sale of that land on the market.

A. M. GLASGOW, called by defendants, testified by deposition:

My name is A. M. Glasgow. I live at Powell. I have lived there 9 years. I am a farmer and my farm is about 2½ miles East and North of Powell. I know Mr. Ide and know where his land is located. I have seen the ditch and embankments that have been placed upon his land by the Government. They were placed there this Summer. In a rough way I estimate about 5 acres of his land has been destroyed by the digging of the ditch, enlarging of Bitter Creek, and the piling up of earth and stones upon his land. I am somewhat familiar with the market value of land in this section of the country. Before these changes were made by the Government, I think Mr. Ide's East 40 was worth \$200.00 an acre. The 5 acres of land where the Government did its work is now valueless. Before these changes were made it was worth \$200.00 an acre. The effect of the embankment and the digging of the ditches and the enlargement of Bitter Creek would in my estimation decrease the value of the rest of the 40 acres at least 25%.

I know where the drains empty into Bitter Creek upon this land and below. There was enough snow fall there before Bitter Creek was lowered for the water to run off from these drains. I do not know of any necessity for 488 lowering Bitter Creek. It was not lowered immediately above the siphon. I am not familiar with the location of Bitter Creek. I know there are bridges across it. I do not know who constructed them. They were there before Bitter Creek was enlarged. One bridge was down at Mr. Ide's farm and one or two at Caldwell's farm and further up.

Cross-Examination.

I do not pretend to say that I know anything about why it was necessary to lower the bed of Bitter Creek in order to make it a proper drainage canal. I am not an engineer and do not pretend to say whether that was good engineering or not.

Re-Direct Examination.

I think the deepening and widening of Bitter Creek, making the banks fresh would have an effect upon the caving in of the banks and, in my opinion, some of the banks would cave in during the year. The embankment down nearest to the creek would hold water when this land is irrigated. The water would run down there and stop and the water would kill the crop. I do not know how much would be destroyed by this ditch.

Re-Cross Examination.

Whether any land would be soured or rendered useless by water collecting near the banks would depend upon the slope of the land. I do not think any of Mr. Ide's land is boggy at the present time. It had been before the drain was put in. If the deepening of Bitter Creek assists in the proper draining of this land it would be a benefit to it. I would say that the benefit it would be to the land in properly draining it would equal the damage which is caused by the unsightliness of the ditch bank.

Re-Direct Examination.

In speaking about a drain on Mr. Ide's place, I had reference to the tile drain which was put in there before
489 Bitter Creek was deepened for the purpose of draining the land. The tile drain drained the land, and I suppose that the deepening of Bitter Creek had no effect upon draining the land.

Re-Cross Examination.

I suppose the irrigation engineers deepened Bitter Creek for the purpose of draining the lands of this irrigation system, but I do not pretend to know anything about it. Of course it would be necessary to deepen Bitter Creek if the engineers found out they could not drain these lands

without deepening that creek, but I did not know that Mr. Ide's land needed draining.

Re-Direct Examination.

I have no knowledge as to whether Mr. Ide's land needed drainage, and I have no knowledge as to whether or not they constructed a tile drain that drained it before they deepened the creek, and I have no knowledge of whether the deepening of the creek assisted in draining the land.

Re-Cross Examination.

It was my understanding that this tile drain drained Mr. Ide's land, but I didn't know whether it did or not. I could not give the exact date when it was built. I do not think that his land has been seeped for the last 4 years, including this year. His land did not appear seeped. I do not know that the tile drain would not drain his land because Bitter Creek would not carry off the water properly.

T. H. FULTON, called by defendants, testified by deposition:

My name is T. H. Fulton. I live at Powell. It has been five years since I first came here. I am a farmer. My farm is one mile East of town. I am 55 years old. I think I am to some extent acquainted with the market value of land
490 In this community. I can give my judgment which is based upon what I have seen the lands sell for and on the value of the crops produced. I am familiar with Mr. Ide's land. I know where this ditch was built and Bitter Creek was enlarged and deepened on his land. I have seen the ditch out of Bitter Creek running parallel to the original channel and also have seen where the original channel was changed. I remember where the ditch runs out of the original Bitter Creek channel off to the side. There is a small tract of land extending between the original and the new channels. I have noticed the dirt thrown out of the original channel of Bitter Creek on each side and the dirt thrown out of the new ditch on either side. This covers quite a strip of land diagonally across Mr. Ide's farm embracing something like 6 acres. Before these changes were made the market value of those 6 acres was, I think, \$150.00 per acre. Now they are worthless for any purpose except for the ditch and could be sold for nothing. It deteriorates the market value

of the entire tract of Mr. Ide's land. I would hesitate to say as much as 25% or 50%. I have no way of forming any adequate judgment as to the amount of land that would be injured by water backing up next to that embankment and souring the land. I saw where the water was backed up. It is actually injuring the land. It might be possible by some labor and expense to take that water off. The digging of the ditch and the throwing up of the dirt destroyed the alfalfa crop. The land would produce from 3 to 4 tons an acre. I don't know what alfalfa was worth at the time it was destroyed. Alfalfa was worth \$15.00 a ton in the field and \$17.00 a ton, I understand at the alfalfa mill. I sold some alfalfa in June of this year and it seems to me I got \$19.00 a ton at the mill and I think it was \$17.50 a ton in the field.

I know where the drains are located on Mr. Ide's land, but not these near the Garland townsite. I am not an engineer, but I cannot see any advantage in deepening Bitter Creek. The creek seemed to hold all the water that was flowing. Above the siphon on Mr. Ide's land the bottom of the creek now is just the same as it was before the channel was deepened below and above it. The water ran off from those drains before the channel of the creek was deepened. Where the land was dug out and the embankment was placed the soil is a great deal similar to the soil on the balance of the land. It is better there than back in some places. There is a little spot, I should think 5 or 6 acres, which appears to be seeping. This land is a great deal more productive. For land that will produce 5 tons of alfalfa to an acre, I would want \$300.00. I am not familiar with the value of land at Garland.

CHARLES PETERSON, called by defendants, testified by deposition:

My name is Charles Peterson. I live at Garland. I am a blacksmith. I have farmed. I am one of the plaintiffs in the suit of the Lincoln Land Company and others against Sanford and others. I have lived near Garland 9 years, but have lived only two years in town.

I am familiar with Bitter Creek from its mouth to a couple of miles above Caldwell's place. I am familiar with about 12 or 15 miles of the channel of Bitter Creek. It will average from 10 to 12 feet deep. I hardly know how

wide and deep it was before it was excavated and deepened by the Government, but it was a good deep creek before they excavated it. It had a well defined bed. I have been familiar with it ever since I landed here 9 years ago. When I first came here I lived about $\frac{3}{4}$ of a mile from it. I frequently saw water in it. At the point where I lived by Garland it was hardly ever dry. There was water running in it most of the time the first year I was there, but it froze solid in the Winter time. The water must have come from a rain storm or the snow or something. I am not prepared to say. The Government was irrigating at that time, to quite an extent. There was quite a bit of land taken up at that time. As to whether that water was seepage or waste water I can say that at the time I came here I didn't know anything about seepage of course. I was only here a year before my place was seeped.

I know where they took water out of Bitter Creek to irrigate the Garland townsite. It was located due West of Garland, I should judge, about $2\frac{1}{2}$ miles. The Lincoln Land Company constructed a ditch from Bitter Creek to Garland and put in a small dam and took the water out and through this private ditch the water was conveyed to the Garland townsite. The ditch and headgate are not in use at the present time because the Government has diverted the water. The Government dug around the place where the headgate was on the bank of Bitter Creek and it is there now. The only way to get the water through that headgate now would be by putting in a dam.

I am familiar with the market value of land in this community. In my opinion the value of the land in Garland townsite is \$200.00 an acre with water. In my estimation it is worth nothing without water. We have had water through the past season from the Government but our own water is discontinued at the present time. Before the channel of Bitter Creek was changed we were getting water from Bitter Creek under a permit from the State. Our water right had been used 6 years. That is this was the 6th year. We raised abundantly all kinds of crops, grain and alfalfa. If we are unable to get water hereafter we cannot raise these crops. The lowering and changing of Bitter Creek channel has wrecked and totally destroyed our water system at the present time, and we will be unable to raise crops on the land hereafter unless we are able to secure water.

I am not to any great extent familiar with Mr. Ide's land. I know where it is located. I am familiar with the market value of land in this community and Mr. Ide's land is worth about \$150.00 with water. Without water it is worth nothing. I have seen the embankments and ditches that were constructed by the Government upon Mr. Ide's land. I am a little but not much familiar with Mr. Caldwell's land. I know where it is located and have been there. I think the value of Caldwell's land is a good deal the same as Mr. Ide's land, but I am not positive as to that. I do not know where the drains are located on Mr. Ide's land. I know where the drains are located below the place where the Lincoln townsite diverts water. I think there are three of them. The two lower ones have been in use for several years. As to the other I do not know. They were there before the Government changed and lowered the bed of Bitter Creek and the drains worked at that time. I know of no necessity for lowering the bed of Bitter Creek or changing it down at that point. That work would result in cutting us off from water so our headgate is higher than the water there. Bitter Creek in my opinion is a natural water course.

494 There is one bridge across Bitter Creek at its mouth and one between the mouth and Garland and one South of Garland and one West of Garland. One is where our headgate is and one or two up to Caldwell's land that I know of. There were bridges across Bitter Creek before it was enlarged by the Government. One was at the mouth of Bitter Creek and one South of Garland and West of Garland and also at our headgate. I don't know who constructed them. I think the County did first. I should think the bridge South of Garland was probably 48 feet long. The one West of Garland is probably 32 feet or such a matter and the one up here at the headgate I should think about the same, but I don't know for certain.

I am familiar with the amount of rain fall at Powell and that in the hills that are tributary to Bitter Creek. There is about twice as much rain fall back in the hills as on the Flat above because I have been in the hills when it rained and there was no rain fall here. I have been also down here when there was no rain fall up there. This occurs frequently. The grass grows more plentifully up in the hills than around Powell. It grows higher and better. This is due to the moisture—the rain fall. They do some dry farming up there. It is not possible to dry farm near Powell. They have raised grain in the foothills and also gardens without

irrigation. They cannot at Powell. There is much more snow fall up there because I have been there and have seen the difference. The snow stays in the foothills most of all Winter, but it does not near Powell. It accumulates there in the Winter and in the early Spring it melts and runs down. I have seen clouds and storms up there when there was none on the Flat.

Cross-Examination.

I came here in the Fall of 1909. I know nothing about
495 Bitter Creek, or its size or whether it had water in it prior to the Fall of 1909. I am sure I don't know exactly how long the land surrounding Powell had been irrigated when I came here, but I think they opened in 1907 or 1908. I wouldn't say positively. I don't know how much waste water or seepage water flowed down Bitter Creek during the years 1907 or 1908 or 1909. I was here in the Fall of 1909 before the irrigation season closed. I was here in October, 1909. There was but a limited amount of irrigation in October. At the present time there is a limited quantity of water and seepage and drain water that passes down Bitter Creek. I have no idea how many cubic feet of water pass down this drainage channel from seepage, drain and waste during the irrigation season. I know nothing about how much of such water passed down this channel during the irrigation season of 1909. I do not know how much the running of waste and seepage and drainage water through this ditch had lowered the bottom of it by 1909. I don't know when they began deepening Bitter Creek, but it had not been deepened any until I had been here about 3 years. I couldn't say what year. It might have been earlier than 1912, but I could not say. I do not consider the matter of deepening Bitter Creek a thing of great importance in my estimation. I don't know whether the people of the Project were interested in it or not. I was not interested in it myself. I was a farmer in those days. My farm was located about $\frac{3}{4}$ of a mile South of Garland and $\frac{3}{4}$ of a mile from Bitter Creek. The work of deepening Bitter Creek in 1912 was begun probably $\frac{1}{4}$ of a mile Southeast of Garland. The irrigation of the lands of the Government Project had been continued probably I should judge about 4 years before the Lincoln Townsite Company made an application for a water right out of Bitter Creek, but I am not saying for certain. This is only my opinion.

496 **GEORGE W. ATKINS**, called by defendants, testified by deposition:

My name is George W. Atkins. I live about half way between here and Garland. I am 49 years old and am a farmer. I have lived in this community about 9 years. I think I am familiar with Bitter Creek. I have known it ever since I have been in the country about 9 years. I couldn't say positively just where it rises. The part that I am familiar with is from about due North of Powell to the mouth of the creek for a distance probably of about 15 miles. I do not know exactly where the two branches come together. Bitter Creek has a well-defined channel. I think I am familiar with the market value of the land in the community of Garland. I am familiar with the Garland townsite. I couldn't identify the exact land numbers. I know the market value of Garland townsite. It is worth \$200.00 an acre with irrigation water. Without irrigation water it might possibly be worth \$2.00 an acre for town lots. Crops have been raised there since 1912. Grain and alfalfa principally. They were irrigated with water obtained from Bitter Creek at a point about 2½ miles West of Garland townsite. A dam was thrown across the creek there to raise the water up and then it ran down through a ditch constructed from that point to the Garland townsite. The dam was constructed about the year 1912 as well as I can remember or maybe the Fall before. Water cannot now be obtained from Bitter Creek through this ditch without constructing a dam to raise the water up to the ditch. The Government has deepened the creek along at that point or near there and left the head-gates high and dry, so we couldn't get water out of it. The Government was working in that vicinity in the month of May; it was May or June of the present year when they did this work. I don't know why they deepened the channel of the Creek there. I know where the drains are located.

497 They were located there before the creek was deepened and they were in use.

Water must have made the natural bed and banks of Bitter Creek. The water must have been from rains and melting snow flowing down and cutting the channel. The land surrounding Bitter Creek where I know it is practically level land. I remember that in the Spring of 1910 before the Government irrigation waters were turned in that water ran in Bitter Creek. There must have been possibly 4 or 5 second feet at one time. I couldn't state how long it ran, but

water ran in the creek a good part of the month of April. We had a pretty heavy snow that Winter, and the snows melting and rain ran down the creek. I don't think there was much in the creek in March, but the flow was mostly in April. There must be at least twice as much rain fall up around the hills on the bench as there is here at Powell. I have seen it rain and snow up there when it did not rain or snow here. In passing back and forth over the country I have observed water holes in the banks of Lateral A, the highest point of irrigation. I know very little about dry farming up on the bench. I have seen a few patches of rye and oats. They were not irrigated. I don't think you can dry farm around Powell. As a rule the clouds are usually in the direction of the bench or Hart Mountain and they pass around the bench and cross the river at McCullough Peaks. The clouds sometimes come towards Powell, but, as a rule, it usually rains or snows up there and when they do come down there, there isn't much left but a shower. When it snows up on the bench it drifts in gulches and canons to quite an extent. I have seen snow drift 10 or 15 feet deep up there. It usually melts way along in the Spring, mostly in April. The water from these snows comes down the hills and into Bitter Creek, I suppose. If the water from the rains and snow drifts here were all used

I would say there would be enough to irrigate Mr.
498 Caldwell's land and I think enough to irrigate my land.

Cross-Examination.

Possibly at times I would say that there has been enough water in May to do irrigation with but not always from melting snow,—sometimes rain. The melting snow is usually gone by April. What little there might remain would not produce much if used for irrigation during May. I couldn't say whether or not the melting snow in April might be running along till the first of May. I have seen snow on the bench after the latter part of April up to the first of May on this side of the bench in the gulches. Sometimes it is fresh snow. The drifts melt the first of May and in April. I do not think that it is true that the amount of snow that drifts up there in those hills is inconsiderable for furnishing water. I don't know how large a drainage basin Bitter Creek has. I never measured it.

I never saw Bitter Creek prior to 1909. I know nothing about whether or not it carried water prior to that time. I came here about September, 1909. The lands of the Flat had been irrigated that season. I was told that the water was delivered in 1908, but I am not sure. Whether it was irrigated before that I don't know. I don't think it is possible that the flow of waste and seepage water from the lands that have been irrigated could have washed the channel of Bitter Creek as it did. I can't say how much such waters washed the channel. There is more rain on the portion of the bench which drains into Bitter Creek than on the Flats, but I couldn't say how much of the bench drains into Bitter Creek. I think the last time I was up there on the bench was about a year ago. I had business taking me up there about 5 or 6 times during the year. I cannot give exact dates, but one rain in particular this last Summer was almost due North of here, perhaps a little West. It was almost a water spout. You could see the clouds come
499 nearly down to the earth. I don't know whether it was in August or September. I think possibly it rained at Powell. I was on my farm about $2\frac{1}{2}$ miles East of Powell then, but there was no rain. That which was almost a water spout was just this side of the bench. I couldn't say positively how far it extended in this direction. There is none of the bench proper that drains in this direction. I don't know whether this rain in August or September which was almost a water spout was in such a place as it would drain into Bitter Creek, nor do I know whether the automatic gauge on the creek would register the amount of it that went into the creek. Of course it would increase the water in Bitter Creek. The measurement of the gauge would indicate the amount of water or increase going down at that time provided there was not the same amount of water from seepage and waste going down the creek at the time this water was coming down. Of course if there were less water coming down it would indicate no rain fall had come down. I couldn't say positively at what other date I saw a rain. As near as I can state the rains occurred usually throughout the Spring and Summer months from about the month of May until about September. I cannot say how many occasions it has rained here when it does not rain there, but not very often. But I know that it does not rain here as frequently as it rains up there. I could tell whether the rain was large or small from the length of time it rained. I have seen it rain as long as half an

hour to an hour around the bench. I have never seen anything but what are generally called little showers of rain. But my statement about the rain on the bench is not guess work nor imagination.

Re-Direct Examination.

Yes, it is true that when it rains enough to do any good the farmers quit irrigating to a great extent and request their water turned off, but that is very seldom. I don't remember [buttwice] that I ever wanted my water turned off on account of rains.

W. A. SHOEMAKER, called by defendants, testified by deposition:

My name is W. A. Shoemaker. I live two miles North of Powell. I have lived there since 1908. Prior to that time I lived at Germania South 25 miles. I came to Germania in 1903. I have lived in the Big Horn Basin since January, 1903. I am 67 years old. I am a farmer. I filed on a homestead here in 1907. I had filed before, I think about 1905 or 1906 when the land was segregated by Cody and others and when they let loose of it it was all filed on and I was one of the filers. Then they let us loose from it. We didn't want it until the ditches were completed. I then filed again. My homestead joins the homestead of Charles Grant Caldwell on the South. It corners with his school section. Bitter Creek would be North of my place. I am somewhat familiar with the location of Bitter Creek from my place down to Garland. From there up I have crossed it off and on, but not much. I have been crossing Bitter Creek since 1903. Garland was always our trading place and coming from Garland we had to cross the creek. It was known as Bitter Creek in 1903. I can't tell you how long before they called it by that name. In 1903 it seemed to be the natural channel a creek would have. It had gravel and sand on the bottom most the same as any other creek I ever noticed. The banks were from 3 to 5 or 6 feet high, and that was the condition as far up and down the creek as I knew it.

I have seen water in the creek. There is often water in it. We watered our horses there in coming from Garland and hauling goods. We [staid] over night on the creek;

501 camped on it often from 1903 on when we did our freighting and trading at Garland. I could hardly tell you how often I saw water in the creek. I would be there quite often and water would be either in holes or it would be running water. The running water was along in the Spring, especially in the early Spring. It would probably be too deep to cross after rains and the snows coming off. I couldn't tell how long the water usually ran. I would be just over and back across it sometimes when it was running and sometimes it wasn't running. I have seen it flooded pretty high; seen more than it would carry but that was only one time. I think it was in the Spring of 1908. There was a great rain and cloud burst up West and the water was all over the little first bottoms. Prior to 1907 I never saw it out of the banks. I don't know that I ever saw it full, but I saw it when the running water was deep to the horses in crossing. The water prior to 1907 must have come from between here and the bluffs in the regular water shed. I don't know where it came from. It must have been off the water shed. I don't know whether there are any springs that feed this creek or not. I know of some springs up a way, but couldn't say that they feed the creek. They are on Govey's place, I think. When I first came here there was no bridge across the creek on the stage line. We had to drive right into the creek. The banks had to be cut out so we could drive down in and up. I never assisted in making a ford up there, but I have down here. After I came here we made a crossing to get down on the creek below us there. I guess that it was about 1908. Prior to 1907, I knew about 6 or 8 miles of the channel from here down.

I know that considerable snow falls up in the hills. That portion of the hills that is over on this side is within the Bitter Creek water shed. The snow probably commences in November and December, and probably early. The
502 snow stays there till May. I should say about the first part of May at the outside. We have rain, but there isn't such regularity about it. Occasionally a rain comes up. I have seen as much rain as in other countries I have been in. I think most every year it rains sufficiently before the first of May up in the hills so as to cause a stream to run down Bitter Creek as far as Garland. There is sufficient rain several times to raise the creek. If you had some way to hold the water or some way to keep it, I suppose enough water would come down to raise one crop on Mr. Caldwell's

place. I don't think there is enough without it could be confined. If it could be confined I think it would be enough.

I have seen the embankments on Mr. Caldwell's place. I would not think the embankments would increase the value of Mr. Caldwell's land. I couldn't say how much it would decrease it, but it certainly is not desirable because of the looks of it, and it would be in the way in watering the land. It would hold the water from running back into the creek and would injure the sightliness of the land.

Cross-Examination.

I came onto this Project in 1907. Prior to that time from 1903 I lived at Germania which is South of the project about 30 miles from here. I was engaged in farming then. I would come over here to Garland an average of once a month. I crossed Bitter Creek at Garland. I couldn't really state just when I became familiar with Bitter Creek, but it was when the Government was taking hold of this. There was a lot of the land homesteaded at that time. We came over there and took our homestead. We were located on part of this school land out here, my sons and I, and then I was up and down the creek. We were not located on the school land at Caldwell's, but just West of town. The only time

503 I ever saw running water in the creek would be after storms in the Summer or when the snows were going off in the Spring. I never noticed any water running in the creek except at those times. The creek bed had holes in it and the water would remain there but I couldn't say how long. There was generally water in these holes. It was water that had been left from the rains and floods that came down. I have been quite a way up the creek above Caldwell's school section, but not in the early times and only on the roads where the roads cross the creek. I never had an opportunity to see whether there were any sources to the creek.

I haven't seen Mr. Ide's land since the ditch was dug but the banks produced by the digging of the ditch on Caldwell's land have made it unsightly, and I rather think it would reduce the value of his land. I am not able to judge whether or not this would depreciate the value, but if it was mine, I would rather it wasn't there. That is the way I would feel about it. The deepening of this ditch, making it a drainage canal might have a tendency to drain Mr. Cald-

well's land if it needed it, but I don't know whether his land needs draining or not. If the lands did need draining and the ditch would drain it, then of course it would benefit it.

L. J. Wood, called by defendants, testified by deposition:

My name is L. J. Wood. I am a farmer. I have lived at Garland since the Spring of 1909. Before that I lived in Nebraska. I am 49 years old. I am one of the plaintiffs in the case of the Lincoln Land Company v. Sanford and others. I know the 320 acres of land called the Garland townsite described in the bill of complaint and am one of the owners of it. I know the market value of that land. It is worth \$200.00 an acre with water right. Without water rights it is worth about \$5.00 an acre. I have never lived on the land and have never worked on it, but I am
504 familiar with it and have been familiar with it for a number of years. Crops of alfalfa, hay and wheat and oats have been raised on it for 6 years. It is productive land. Irrigation water for it is obtained out of Bitter Creek. Approximately 4 tons of hay to the acre was raised. The wheat varied. The first year after we plowed up new land it only made about 15 bushels. This year it made about 35 bushels. The oat crop varies from 25 to 40 bushels.

The water to irrigate this land is secured from Bitter Creek at a point about 2 miles from Garland townsite by an open [ditch] most of the way belonging to the townsite. They have used this ditch about 6 years. The water is taken out of Bitter Creek all through the irrigation season from about the first of April till perhaps the first of October. The condition the headgate is in now on account of the deepening of Bitter Creek is that the water in the bed of the creek is lower so that our headgate is practically 3 or 4 feet above water and, as it stands now, it is impossible to get water from Bitter Creek.

I know where the drains are located. The one that empties directly into the townsite land at Garland has been there 5 or 6 years. The one that runs into the Richards place was put in after the lowering of Bitter Creek. I think only one other drain from the townsite up was in use before Bitter Creek was deepened. Before the bed of Bitter Creek was deepened it was low enough to give a drain at Garland. It did not interfere with the drain at all. There was

plenty of fall from the mouth of the drain down into Bitter Creek. I am familiar with the channel of Bitter Creek from Caldwell's place down. I knew it before it was enlarged by the Government. It had a well-defined channel—in fact, it was rather a large channel. It had well-defined banks. It would average 15 to 20 feet wide and probably from 8
505 to 10 feet deep. There were bridges across it. The channel I suppose was made by water flowing through it. There were two bridges at Garland and one West of Garland a mile and then one West of that another mile, and one or two up in this country. The bridges at Garland were constructed by the county partially and by the people around Garland. Before the bridges were built the people forded Bitter Creek. It was necessary to dig the banks down to get across.

I should judge that they have as much again water fall on the bench as we have down here because I have been up there and seen it rain and seen it rain here. Have been up there after cattle and we had a rain fall there, but when I came down here there wouldn't be any rain at all. It snows up there more than it does with us. I have lived on Bitter Creek ever since I have been here. My house is about 10 rods from the creek. Practically every year flood waters come down Bitter Creek. I don't remember a year that it didn't. It varies from 1 to 3 times a year in the Summer time. It is in the Summer time. There is practically no flooding in the Spring. Flood waters have come down here when there was no rain about Garland from the rains that fell on the bench. I have known the water to rise at my house 3 or 4 feet when it wasn't raining at my place. There is snow up on the bench all Winter and running into the Spring quite late. The snow disappears along in April. Most of the water from that snow flows into Bitter Creek, but not that on the West end of the bench. It affects the water that passes my place by making more water go down. Up on the bench there are a great many gulches and they fill with snow in the Winter time. It drifts in there many feet deep and melts and freezes and becomes practically ice. In the Spring it melts and runs down Bitter Creek. I have seen the new ditch excavated by the Government on Mr. Ide's land, but I don't recall that I ever saw any water in it.

506

Cross-Examination.

I came to this country in the Spring of 1909 and located near Garland where I am at the present time. I was out here in the Fall of 1908 and filed on land October 5, 1908. I [staid] about a week or ten days and then came back in the Spring of 1909. All the knowledge I have of Bitter Creek is the condition of Bitter Creek since this project was opened up and since the waste and seepage water began to run through Bitter Creek. I am one of the owners of the Lincoln townsite. I do not know why it is called Lincoln townsite. It is used for agricultural purposes, but we have several town lots established there. The other owners are G. W. Atkins, Mr. Franklin, Mr. Peterson and S. A. Nelson. Our interests are undivided. My estimate of the value of the land in acres instead of lots was because I was referring to the part we farmed and that part is worth \$200.00 an acre. I am qualified to testify about the market value of the land. There was a 40-acre tract sold one mile from our land for \$10,000. That would be \$250.00 an acre. It was Mrs. Nelson's land and she sold it to Charlie Pease. That was this Fall. I don't remember the time. I don't know of any other land being sold there recently. That one sale is the only one that I remember that has been sold during the last year. They told me it was sold for that price. That is all I know about it—what he said he gave for it, but there have been other sales there. I do not base my knowledge of the value of this land on that one sale alone, but I don't know of any other transactions. There are improvements upon this land in the Lincoln townsite. On my land I have a good fence all around it and most of it seeded to alfalfa. There are no buildings.

In a general way, I am acquainted with the ditch that was made through Mr. Ide's land and also with Bitter
507 Creek where it was deepened through his land. The creek ran through his land before it was deepened, so that it wasn't cut up any more after it was deepened than it was before, except that it was wider and the banks on each side make more waste land than a common creek would. The land, however, was cut up before in the same number of parcels and the same is true in reference to Caldwell's land. I have never followed up the ditch through Caldwell's land, nor have I seen if they cut off any more corners or not.

I think it was about 6 years ago when we first took water out of Bitter Creek for the purpose of irrigating the town-site, but I wouldn't be right positive because I didn't own the land at that time. I don't just remember the date. I didn't set it down. At that time there was a great deal of waste in seepage water from the irrigation of lands above running down through Bitter Creek. I couldn't tell the amount. I don't know what amount of water aside from seepage water there is in Bitter Creek from the natural flow per day. I have seen days when there was a great deal more than others. In the course of a year it would amount to a considerable. The water that I saw was the result of some sudden storm of rain, but there is no natural flow in the creek in the irrigation season unless there is a storm.

I don't know whether I said there were three storms last year or not. I might have said that there were probably 3 storms in a year. I think they will average that many, but some years there might not be three. I think an inch of rain fall upon the basin of this creek would send considerable water into Bitter Creek. I think this because of the nature of the country through which it would run. Of course, I don't know how many times we have had an inch of rain fall in this community over the drainage basin, and I don't
508 know just how many times up around the bench we have had that much rain because it rains up there more than it does down with us. I would say there would be 40 or 50 square miles in the bench covered by these extraordinary rains we have there that we don't have here. I suppose that the drainage area of Bitter Creek was more than 40 square miles. I don't know the area of the bench that is drained into Bitter Creek basin, but, in my opinion, it would far exceed 5 square miles. Even if I am mistaken about the areas draining into the bench and the areas of the entire drainage basin of Bitter Creek I would still not say that my opinions are unfounded. It does rain more frequently on the bench than here, but how much rain falls and over how much territory it falls I don't know. It is pretty hard to tell how much territory is covered and I had no way to measure the rain when I was up there. I would be on the bench when it was raining and when I got down off the bench a ways it would be dry. I judged from that that it didn't rain on the Flat. In the Summer previous to this year I have been on the bench 8 or 10 times and it rained practically every time I was up there. I don't know how many times it rained

down here when it didn't rain up there. I do have a real reason for saying that it rains up there more than it does down here because I have known it to rain up there a great many times when it doesn't rain here, and I have not known it to rain here a great many times when it doesn't rain there. Ordinarily it rains there when it rains here, but I couldn't say positively that it rained there when it rained here. Powell is practically in the center of this drainage basin. I don't think it would necessarily be true that the average rain-fall at Powell would be the average rain-fall in this drainage basin, although it is in the center of the basin. In an area of 30 square miles in a mountainous country
509 the rain fall might vary a good deal, but there aren't many mountains over there. It is merely a bench that rises two or three hundred feet.

I do know about the snow up there on the bench. It drifts more there than it does down here. It drifts over the edge of the bench. They have more snow on the level there than we have down here. I know that by being up there when there was a lot of snow and there wasn't any down here. I never have been there when there was no snow there but there was snow here. I don't know whether the snow melts more quickly down here than up there. I don't know whether or not it is any warmer down here than up there. I don't know how many inches it takes to make an inch of water but it will depend upon the kind of snow. I don't know whether or not it takes 15 inches of snow to make an inch of water. I don't know how much of a collection of snow it would take to make a run-off of an inch of water. If it takes an inch of water to make an appreciable run-off into Bitter Creek, the snow would have to melt pretty fast in order to get into the stream.

In most places the banks of the stream are abrupt and steep. I don't know whether or not that is characteristic of all dry gulches or dry washes that are made by sudden rushes of water due to cloud bursts. I suppose all dry washes in this country are made by water. There are no trees growing along this creek in this particular part of the country. There is lower down or was when I came here. There are no trees on Bitter Creek this side of Garland. There was only one tree that ever grew on Bitter Creek. I was here in the Spring and there wasn't any natural grass or wild grass here. The first irrigation water was in the Fall of 1908. There are no willows growing along Bitter Creek.

There have been cottonwood trees on the creek, but no brush that I know of. The cottonwood trees here below Garland and from there on down. Above Garland there was never any trees or any kind of willows that I know of. I couldn't say as to reeds that grow in running water or grasses that stand up in running water above Garland. I have never followed the creek above Caldwell's place.

Re-Direct Examination.

I don't remember exactly when I purchased this land. I think it was in March, 1918. When I bought it I was relying upon a water right from the State and I knew that this land had been receiving water under a State right. I knew the Government had deepened Bitter Creek down through Garland and further up, but I didn't know what their intention was. At that time they had deepened it up to Garland, but it hadn't been deepened at that time so as to deprive me of any of my water right when I purchased the land and I had no knowledge at that time that the Government intended to deepen it further. I think it was in May that I first had knowledge that the Government was going to deepen it so that I would be deprived of my water. The first knowledge I had of that was that they went up and cut off my headgate by digging a channel around the headgate and letting the water out so that it would not flow into the headgate. It looks to me like the channel was just out in there so as to get the water away from the headgate. That is all I could say.

Land has been increasing in value here for a number of years; steadily increasing year after year. I did not testify as to how much I paid for this land, but I testified that some land was sold for \$250.00 an acre. I understand there were some payments due to the Government in addition to that, but I don't know how much.

Re-Cross Examination.

This land that I testified about that was sold for \$250.00 an acre possesses a water right from the Government under the Reclamation Service. That sale was no part of the transaction in the purchase of the townsite. We paid \$150.00 an acre for our land in the townsite. I had a guarantee of a water right from my vendor. I had no separate contract about a water right. He simply gave me a

straight warranty deed, or rather we have a contract, not a warranty deed, but I don't remember whether the contract says anything about water rights or not.

ARTHUR W. IDE, a witness on behalf of defendants, being recalled for further cross-examination by the plaintiff, testified by deposition:

Plaintiff's exhibit 1A is a patent of the United States of America to me for the land in controversy in this suit.

(Plaintiff offers in evidence Plaintiff's Exhibit 1; defendant objects as incompetent and immaterial and tending to establish no issue in this case.)

512 JAMES B. TRUE, called by defendants, testified:

My name is James B. True. I am State Engineer of the State of Wyoming. I have held that office since February 21, 1915, 4 years next month. Since the Fall of 1913, I have been connected with that office. During that period I have become familiar with the streams of Wyoming. I have seen Bitter Creek, but not prior to the time the Government Project was constructed. As State Engineer it is my duty to pass upon all applications for permits for the diversion of water from the natural streams of the State. In the performance of that duty I have endeavored to familiarize myself with the natural streams of Wyoming. I believe that I am generally familiar with these streams.

Defendant's Exhibit B-1 is a map of the State of Wyoming, showing the streams of the State. This map accompanied the 13th Biennial Report of the State Engineer and was part of that report. It was compiled and published by the United States Geological Survey and the data shown there and the authority of the map comes directly from the United States Geological Survey. I am able to verify the map with respect to its showing of water courses and streams from my general knowledge of the streams of the State. I think the map is as accurate as a map can be made on that scale. It shows the natural water courses in the state. There are innumerable instances in Wyoming where water has been appropriated from sources of supply where the flow of water is intermittent in character. There is a nat-

ural run off down the water course and almost always the entire flow is confined to a few weeks in the Spring of the year and during the rest of the season the water course is entirely dry except in cases of an exceptionally heavy rain. The streams of that character are shown on this map.

Where the green tint appears on one of these intermittent streams it indicates an adjudicated water right to that intermittent stream. The water rights in a great many streams have not yet been adjudicated and are not stated on that map.

This map shows Bitter Creek without giving it any name. The map does not show Clear Creek.

(Defendants offer in evidence defendants' exhibit B-1. Objected to by plaintiff on the ground that it is hearsay and immaterial. Ruling reserved.)

(The facts shown on this map material in this case are as described in the foregoing testimony of the witness True, there being no name to the intermittent stream representing Bitter Creek, the same being represented by an intermittent line. Of the various other streams on this map part are designated by continuous lines and part by broken or intermittent lines.

514

Cross-Examination.

I have examined Bitter Creek and I ought to know where it is located and I have also examined the map and I know that Bitter Creek is represented thereon. I don't know what is the draw nearest to Bitter Creek North or West that runs into Shoshone River. But I have had a particular occasion to examine Bitter Creek. I also called up there. I know Bitter Creek and I know it is located as shown on that map. It is shown to go through Garland. There is no draw so close to Garland as Bitter Creek is shown on that map. I am not speaking of draws. There are draws all over the state. The reason I know that the map intends to represent Bitter Creek instead of some other draw, is that the State co-operates with the Geological Survey and Mr. Follansby, the Chief Officer, and I discussed what the map should show before the map was prepared. I visited this country myself. The first time was in May, 1915. I was never there prior to the time the irrigation project was opened up. A great deal of the information shown on this map was compiled in my office.

A great deal of the data was secured by the Geological Survey and the State of Wyoming in co-operation and a good deal of the facts, as I say, were compiled at the State Engineer's office. I cannot tell you exactly who secured the information but it was a man detailed by the Geological Survey for that purpose and he was in the office a good many months during the year 1915. This map was made from facts secured in 1915 and all the other data that was available prior to that time. We have records in our office showing the condition of these streams going back to the permits here first issued. The data was secured from all available information in the State Engineer's office at that time and the information the Geological Survey had.

515 There were certain maps filed in the State Engineer's office,—the Reclamation Survey, and the accuracy of the survey was certified to by the Project Engineer. They were maps accompanying permits filed by Mr. Caldwell and others certified to by licensed engineers as to their accuracy. The map filed by the Reclamation Service does not attempt to show the amount of water in the creek, but simply a line on a blue print showing the line of the creek. There were maps and records in the Engineer's office showing the Shoshone River and tributaries which were compiled prior to any work done by the Reclamation Service. Some of the maps were filed when the Reclamation Service made application for a permit to divert and use the water originally. I could not say off-hand whether or not those maps contain a map of Bitter Creek. As to whether or not when one makes an application for water upon a stream in this State to appropriate its water and designates something in his application as a stream, we have no discretion in the matter about granting the permit when I receive such an application, I will say that if there is no unappropriated water in the source of supply The State Engineer is authorized under the law to reject the application.

I would make an investigation to determine about this unappropriated water in Bitter Creek. In case there is no unappropriated water in the stream, then the authority to refuse the permit is given by law. The State Engineer determines whether or not there is any unappropriated water in the stream. Usually I satisfy myself about it. I could not intelligently without an investigation pass on the question of whether or not a man had a right to appropriate water from a dry gulch. Should a man make an applica-

tion to appropriate water from some creek naming it which I had never heard of in the State of Wyoming, I would receive the application and file it tentatively. The
516 applicant is not supposed to go ahead and appropriate any water. One of the reasons given for authorizing the State Engineer to refuse an application is where there is no unappropriated water in the stream supply or where it happens to interfere with existing rights or threatens to prove detrimental to the public welfare. I would have no right to prevent one appropriating water of a stream which comes down from occasional storms in the Summer where there is no other application or rights on the same stream. I usually make an effort to determine the amount of water in the streams and the time when it is there. I have a right to refuse to grant a permit where the application would interfere with other parties or on the ground of public policy when there is no unappropriated water. In case of an application for a water right from a stream which has water in it from occasional rain storms in the Summer and no one else has made an application for an appropriation on such a stream and therefore it doesn't interfere with any one's else rights, I would allow the appropriation on the ground that there is unappropriated water. The purpose is to enlarge beneficial use of a limited water supply. In the Bitter Creek case, I made a personal investigation before granting the permit. I went on the ground with Mr. Caldwell and satisfied myself that there was water in the stream subject to appropriation. I went on the stream with Mr. Caldwell early in May, 1915. The first week of May, if I recall correctly. There was water running in that stream. I should judge there was then about 8 second feet of water. Caldwell has made several different appropriations. One permit was granted before I was State Engineer and the right was adjudicated since I have been State Engineer. There was another enlargement filed and it was approved by me. In regard to
517 what was done prior to 1915 I know nothing except what was in the records of my office and these records will show for themselves.

If water is already appropriated for land, we do not grant another appropriation for the same land upon the same source of supply. In regard to what I have to say about the endorsement upon the application of the United States to make an appropriation from Bitter Creek for the irrigation of certain lands, I will answer that it was done

by my predecessor. The decisions reached by the State Engineer are subject to appeal. It is certainly a fact that an application is allowed or refused as a matter of the personal opinion of the incumbent at that particular time in the office of the State Engineer.

518

Defendants' Exhibits.

The following Exhibits were offered in evidence by defendants and admitted:

Defendants' Exhibits A to Z, inclusive (except J) are the photographs described by defendants' witnesses, Charles G. Caldwell and Arthur W. Ide, and will be available for inspection at the oral argument.

519 Defendants' Exhibit B-1 is a large map of Wyoming described by defendants' witness, James B. True, and will be available for inspection at the oral argument.

520 Defendants' Exhibit B 2 is a duly certified copy of Permit 10162, in the name of Charles G. Caldwell, taking water from Bitter Creek through Caldwell No. 1 Ditch, as the same appears of record in the office of the State Engineer of the State of Wyoming, in Book 33, of Applications on Page 45 and filed for record June 6, 1910; the material parts thereof being the following:

521 Application for Permit to Divert and appropriate the Water of the State of Wyoming.

Water Division No. 3

District No.

I, Charles D. Caldwell of Powell, County of Big Horn, State of Wyoming, being duly sworn according to law, upon my oath say:

1. The name of the applicant Charles G. Caldwell,
2. The postoffice address of the applicant Powell, Wyoming.
3. The use to which the water is to be applied is Irrigation and Domestic.

4. The name of the ditch or canal is Caldwell Ditch No. 1.
5. The source of the proposed appropriation is Bitter Creek.

6. The headgate of the proposed ditch or canal is located N. $65^{\circ}45'W$. 1334 ft. from the SW corner of Lot 37, Tp. 56 R. 99 W.

7. The said ditch or canal is to be one fourth [miles] long and to pass through the following lands (give route by courses and distances, or by naming legal subdivisions crossed): the south east $\frac{1}{4}$ of the $SE\frac{1}{4}$ of Lot 38, Tp. 56 N. R. 99 W.

8. The dimensions of said works are: (a) (At headgate) Width on top (at water-line) three feet; width on bottom Two feet; depth of water one [feet]; grade six feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

522 (At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

(At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

9. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any.

1st. Earth. No tunnels No fluming.

10. The estimated cost of said ditch is Five Hundred Dollars.

11. The land to be irrigated has a total area of (Forty) 27 acres, described as follows: (Give estimated acreage in fractions of subdivisions)

$SW\frac{1}{4}$ of the $SW\frac{1}{4}$ of Lot 37, Tp. 56 N. R. 99 W. 40 A

Change ~~to~~ to correct error in original. See also Permit 10163

CLARENCE T. JOHNSTON,
State Engineer

Dec. 30, 1910

12. Construction will begin on proposed works on or before September 1st, 1910.

13. The time required for the completion of ditches and other distributing work is one year from September 1st, 1910.

14. The time required to complete the application of water to the beneficial use stated in this application is Two years from December 31st, 1910.

15. A map of the proposed ditch or canal, prepared in accordance with Chapter 14, R. S. 1899, accompanies this application.

Signed: CHARLES G. CALDWELL.

Note:—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

523 The State of Wyoming, }
 County of Big Horn. } ss.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by Charles G. Caldwell this 1st day of June 1910.

Seal

JOS. H. NEVILLE,
United States Commissioner

Notice of completion received May 15, 1911.

Proof submitted Apr. 1914

The State of Wyoming, }
State Engineer's Office. } ss.

This Is to Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: no backwater above diversion dam shall be permitted which shall interfere with drainage of surrounding lands.

Construction of the proposed work shall begin within one year from the date of approval.

The time for completing the work shall terminate on December 31, 1912.

The time for completing the appropriation of water for beneficial use shall terminate on December 31, 1912.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31, 1912, and the additional volume used for domestic purposes on or before said date.

Witness my hand this 6th day of October A. D. 1910.

CLARENCE T. JOHNSTON,

State Engineer.

524 [Defendants] Exhibit B-3 is a duly certified copy of a final certificate of appropriation issued to Charles G. Caldwell under Permit No. 10162 as the same appears of record in the office of the Board of Control of the State of Wyoming, in Book 36, page 127, and is as follows:

525 The State of Wyoming
Certificate of Appropriation of Water

Certificate Record No. 36 Page 127

Whereas, Charles G. Caldwell has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshone River through the Caldwell No. 1 Ditch under Permit No. 10162 for irrigation of the lands herein described, lying and being in Park County, Wyoming. & domestic purposes.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 11th day of April, A. D. 1914, in Order Record No. 5, Page 12, determined and established the priority and amount of such appropriation as follows:

Name of [Appropriator] Charles G. Caldwell; Postoffice Address Powell, Wyoming; Amount of Appropriation 0.38 cu. ft. per sec.; Date of Appropriation June 6, 1910; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage Twenty-seven (27) acres

27 A Lot 37, T. 56 N. R. 99 W.

The right to water hereby confirmed and established is limited to irrigation and domestic purposes and the use is

restricted to the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, A. J. Parshall, President of the State Board of Control, have hereunto set my hand this 3rd day of September A. D. 1914, and caused the seal of
526 said Board to be hereunto affixed.

Attest: LOUISE JABELMANN, Secretary
A. J. PARSHALL,
President.

527 Defendants' Exhibit C-1 is a duly certified copy of Permit No. 10163, in the name of Charles G. Caldwell, taking water from Bitter Creek, through the Caldwell No. 2 Ditch, as the same appears of record in the office of the State Engineer of the State of Wyoming, in Book 33, of Applications on Page 46, and filed for record on June 6, 1910; the material parts thereof being as follows:

528 Application for a Permit to Divert and Appropriate the Water of the State of Wyoming

Water Division No. 3

District No. . .

I, Joseph H. Neville of Byron, County of Bighorn, State of Wyoming, being duly sworn according to law, upon my oath say:

1. The name of the applicant is Charles G. Caldwell.
2. The postoffice address of the applicant is Powell, Wyoming.
3. The use to which the water is to be applied is Irrigation and Domestic.
4. The name of the ditch or canal is Caldwell Ditch No. 2.
5. The source of the proposed appropriation is Bitter Creek.
6. The headgate of the proposed ditch or canal is located N. 59°W. from the SW corner of Lot 37 in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot 38, 1341 feet, Township 56 N., Range 99 W.

7. The said ditch or canal is to be $\frac{3}{8}$ of mile long and to pass through the following lands (give route by courses and distances, or by naming legal subdivisions crossed):

The E $\frac{1}{2}$ of SE $\frac{1}{4}$ of Lot 38 or from headgate N. 30° E.

8. The dimensions of said works are: (a) (At headgate) Width on top (at water-line 3 feet; width on bottom 2 feet; depth of water 1 [feet]; grade 6 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

529 (At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

(At) Width on top (at water-line) feet; width on bottom feet; depth of water feet; grade feet per mile.

9. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any.

1st. Earth. No tunnels. No fluming.

10. The estimated cost of said ditch is 500 Dollars.

11. The land to be irrigated has a total area of (40) 53 acres, described as follows: (Give estimated acreage in fractions of subdivisions)

The NW $\frac{1}{4}$ of SW $\frac{1}{4}$ Lot 37—40 acres in Tp. 56 N. R. 99 W. SW $\frac{1}{4}$ SW $\frac{1}{4}$ Lot 37 all in Tp. 56 N. R. 99 W. Change made to correct error in original. See also Permit #10162

CLARENCE T. JOHNSTON

State Engineer

Dec. 30, 1910.

12. Construction will begin on proposed works on or before Sept 1st. 1910.

13. The time required for the completion of ditches and other distributing work is one year from Sept. 1st, 1910.

14. The time required to complete the application of water to the beneficial use stated in this application is Two years from Dec. 31, 1910.

15. A map of the proposed ditch or canal, prepared in accordance with Chapter 14, R. S. 1899, accompanies this application.

Signed: JOS H. NEVILLE

Note: The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

The State of Wyoming, }
County of Big Horn. } ss.

530 I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by Jos. H. Neville this 2nd day of June, 1910.

Seal

C. B. KING,
Notary Public

My commission expires July 23, 1911

Notice of completion received May 15, 1911

Proof submitted Apr. 1914.

The State of Wyoming, }
State Engineer's Office. } ss.

This Is to Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: no backwater above diversion dam will be permitted which will interfere with drainage of surrounding lands.

Construction of proposed work shall begin within one year from the date of approval.

The time for completing the work shall terminate on December 31, 1912.

The time for completing the appropriation of water for beneficial use shall terminate on December 31, 1912.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land

reclaimed on or before December 31, 1912, and the additional volume used for domestic purposes on or before said date.

Witness my hand this 6th day of October A. D. 1910.

CLARENCE T. JOHNSTON,
State Engineer

531 Defendants' Exhibit D-1 is a duly certified copy of a final certificate of appropriation issued to Charles G. Caldwell under Permit 10163, as the same appears of record in the office of the Board of Control of the State of Wyoming, in book 36, at page 128, and is as follows:

The State of Wyoming

532 **Certificate of Appropriation of Water**

Certificate Record No. 36 Page 128

Whereas, Charles G. Caldwell has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshone River through the Caldwell No. 2 Ditch under Permit No. 10163 for irrigation of the lands herein described, lying and being in Park County, Wyoming, & domestic purposes.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 11th day of April, A.D. 1914, in Order Record No. 5, page 12, determined and established the priority and amount of such appropriation as follows:

Name of Appropriator Charles G Caldwell; Postoffice Address Powell, Wyoming; Amount of Appropriation 0.76 cu. ft. per sec.; Date of Appropriation June 6, 1910; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage Fifty-three (53) acres

53 A. Lot 37, T. 56 N. R. 99 W.

The right to water hereby confirmed and established is limited to irrigation and domestic purposes and the use is restricted to the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one

cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, A. J. Parshall, President of the State Board of Control, have hereunto set my hand this 3rd day of September, A.D. 1914, and caused the seal of said Board to be hereunto affixed.

Attest: LOUIS JABELMANN, Secretary

A. J. PARSHALL, President

533 Defendants' Exhibit D-2 is a duly certified copy of Permit 3173 of Enlargements, in the name of Christopher Althoff, et al., taking water from Bitter Creek through an enlargement of the Bitter Creek Ditch, as the same appears of record in the office of the State Engineer of the State of Wyoming in Book 12 of enlargements, page 92, and filed for record May 3, 1915, the material parts thereof being as follows:

534 Application for a Permit to Divert and Appropri-
 appropriate the Water of the State of Wyoming.
 Water Division No. 3 District No.

Enlargement of the Caldwell No. 1 Ditch under Permit No. 10162.

I, Russell Kimball of Cody, County of Park, State of Wyoming being duly sworn according to law, upon my oath say:

1. The location and description of the ditch to be enlarged is as follows:

2. The Head-gate is situated in SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot 38 of Resurvey, T. 56 N. R. 99 W. N. 65° 45' W. 1334 feet from the government corner a set stone appropriately marked at SW Cor. of Lot No. 37 of Resurvey of Section Township 56 N., Range 99 West of the 6th P. M.

3. Said ditch is 0.50 miles long and passes through the following lands (give legal subdivisions) the same being correctly shown on the map accompanying this application:

SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot No. 38 and SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Re-Survey T, 56 N. R 99 W. of 6th P. M.

4. The dimensions of said ditch are: Width on top (at water-line) four (4) feet; width on bottom two (2) feet; depth of water one (1) [feet]; grade 5.28 feet per mile.

5. Said ditch now serves to irrigate the following described land:

27 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56 N. R. 99 W. of 6th P. M.

6. The total area now irrigated from said ditch being twenty-seven (27) acres.

7. Application is hereby made for permission to enlarge or extend the use of water through the above named and described ditch and to divert and appropriate the water of the state as follows:

1. The name of the applicants Christopher Althoff, Charles G. Caldwell and Daniel H. Bagley.

2. The postoffice address of the [applicant] is Powell, Wyoming respectively.

3. The use to which the water is to be applied is Irrigation, domestic and livestock.

4. The name of the ditch or canal is Bitter Creek No. 1 Ditch. Enlargement of Permit No. 10162.

*5. The source of the proposed appropriation is Bitter Creek, a tributary of Shoshone River.

*If the proposed work is to be an extension of the original ditch, give the location of the head of the extension by courses and distances from the nearest Government corner.

And the head of the proposed extension is located in SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 Resurvey T. 56 N. R. 99 W. N. 88° 30' E. 1320 feet from the government corner at the SW Cor. of Lot No. 37 of Resurvey Township 56 North, Range 99 West.

6. The said ditch or canal as enlarged is to be 1.25 miles long and to pass through the following lands (give sections, townships and ranges): SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 38, and S $\frac{1}{2}$ S $\frac{1}{2}$ of Lot No. 37 of Resurvey, T. 56 N. R. 99 W. of the 6th P. M.

7. The dimensions of said ditch are to be: (a) (At head-gate) Width on top (at water-line) 5 feet; width on bottom 3 feet; depth of water $1\frac{1}{2}$ feet; grade 5.28 feet per mile.

(b) Give dimensions at each point where reduced in size, stating miles from headgate:

536 (At——) Width on top (at water-line)——feet; width on bottom——feet; depth of water——feet; grade——feet per mile.

(At——) Width on top (at water-line)——feet; width on bottom——feet; depth of water——feet; grade——feet per mile.

8. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd. Number and length of tunnels, if any. 3rd. Amount of fluming, if any. 1. Earth. 2. No tunnels. 3. No flumes.

9. The estimated cost of said enlargement is One Hundred (\$100.00) Dollars.

10. The land to be irrigated has a total area of 118 acres, described as follows: (Give estimated acreage in fractions of subdivision)

[Cristopher] Althoff:

36 acres $SE\frac{1}{4}SW\frac{1}{4}$ of Lot No. 37 of Resurvey. T. 56 N. R. 99 W of 6th P.M.

Charles G. Caldwell and Daniel H. Bagley, an undivided one half interest and being assignees of H. A. Bull and Charles E. Wetmore:

38 acres $SW\frac{1}{4}SE\frac{1}{4}$ of Lot No. 37 of Resurvey, T. 56 N. R. 99 W. of 6th P.M.

40 acres $SE\frac{1}{4}SE\frac{1}{4}$ of Lot No. 37 of Resurvey. T. 56N. R. 99 W. of 6th P.M.

4 acres $NE\frac{1}{4}SE\frac{1}{4}$ of Lot No. 37 of Resurvey. T. 56 N. R. 99W of 6th P.M.

82 acres, Total acreage of Caldwell and Bagley.

11. Construction of the proposed enlargement or extension will begin within one year from date of approval of this application.

12. The time required for the completion of enlargement or extension is two (2) years from date of approval of this application.

537 13. The time required to complete the application of water to the beneficial use stated in this application is four years from date of approval of this application.

14. A map in duplicate, prepared in accordance with the provisions of Section 35 of the Water Laws, accompanies this application.

Signed: RUSSELL KIMBALL
Wyoming State License No. 38

Note:—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

Note:—Before applications for the enlargement of ditches can be approved, the written consent of the owners of such ditches must be secured, and this must accompany the application.

The State of Wyoming, } ss.
County of Park.

I Hereby Certify that the foregoing application was signed in my presence and sworn to before me by Russell Kimball, this 22 day of April 1915.

Seal

OTTO F. KOENIG, Notary Public

My commission expires March 18, 1917

Notices of expiration mailed Oct. 1, 1917

Notices of completion received Oct. 9, 1917

Proof submitted Nov. 1917

538 The State of Wyoming, } ss.
State Engineer's Office.

This Is to Certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: no backwater above diversion dam shall be permitted which shall interfere with drainage of surrounding lands.

This permit grants only the right to use surplus water of the stream when all prior rights are satisfied.

Work will begin within one year from date of approval.

The time for completing construction shall terminate December 31, 1917.

The time for completing the appropriation of water for beneficial use shall terminate December 31, 1919.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31, 1919, and the additional volume applied to domestic and stock purposes on or before that date.

Witness my hand this 10th day of June A.D. 1915.

JAS. B. TRUE, State Engineer

539 Defendants' Exhibit E-1 is a duly certified copy of Permit 3174 of Enlargements in the name of Christopher Althoff, taking water from Bitter Creek through an enlargement of the Caldwell No. 2 Ditch as the same appears of record in the office of the State Engineer of the State of Wyoming, in Book 12 of Enlargements on page 93, and filed for record May 3, 1915; the material parts thereof being as follows:

540 Application for a Permit to Divert and Appropri-
ate the Water
State of Wyoming

Water Division No. 3

District No.

Enlargement of the Caldwell No. 2 Ditch, under Permit No. 10163.

I, Russell Kimball of Cody, County of Park, State of Wyoming, being duly sworn according to law, upon my oath say:

1. The location and description of the ditch to be enlarged is as follows:

2. The head-gate is situated in SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot No. 38 of Resurvey T. 56 N. R. 99 W. N. 59° W. 1341 feet from the government corner, a set stone appropriately marked for SW. Cor of Lot 37 of Resurvey of Section Township 56 North Range 99 West of 6th P. M.

3. Said ditch is 0.50 miles long and passes through the following lands (give legal subdivisions) the same being correctly shown on the map accompanying this application:

The E $\frac{1}{2}$ of SE $\frac{1}{4}$ of Lot No. 38 and NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56 N. R. 99 W. of 6th P. M.

4. The dimensions of said ditch are: Width on top (at water-line) four (4) feet; width on bottom two (2) feet; depth of water one (1) [feet]; grade 5.28 feet per mile.

5. Said ditch now serves to irrigate the following described land:

40 acres NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Resurvey. T. 56 N. R. 99 W. of 6th P. M.

13 acres SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Resurvey. T. 56 N. R. 99 W. of 6th P. M.

6. The total area now irrigated from said ditch being 541 fifty-three (53) acres.

7. Application is hereby made for permission to enlarge or extend the use of water through the above named and described ditch and to divert and appropriate water of the State as follows:

1. The name of the applicants Christopher Althoff, Charles G. Caldwell and Daniel H. Bagley.

2. The postoffice address of the applicants is Powell, Wyoming, respectively.

3. The use to which the water is to be applied is irrigation, domestic and livestock.

4. The name of the ditch or canal is Bitter Creek, No. 2 Ditch. Enlargement of Permit No. 10163.

*5. The source of the proposed appropriation is Bitter Creek, a tributary of Shoshone River and the head of the proposed extension is located in NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 Resurvey, T. 56N. R. 99W. N. 0°45'E. 2605 feet from the government corner at the SW Cor. of Lot No. 37 of Resurvey. Township 56 North, Range 99 West of 6th P. M.

*If the proposed work is to be an extension of the original ditch, give the location of the head of the extension by courses and distances from the nearest Government corner.

6. The said ditch or canal as enlarged is to be 1.80 miles long and to pass through the following lands (give sections, townships and ranges): $E\frac{1}{2}SE\frac{1}{4}$ of Lot No. 38. $NW\frac{1}{4}SW\frac{1}{4}$, $W\frac{1}{2}NW\frac{1}{4}$, $NE\frac{1}{4}NW\frac{1}{4}$ and $N\frac{1}{2}NE\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56 N. R. 99 W. of 6th P. M.

7. The dimensions of said ditch are to be: (a) (At headgate) Width on top (at water-line) six (6) feet; width on bottom three (3) feet; depth of water $1\frac{1}{2}$ feet; grade 5.28 feet per mile.

542 (b) Give dimensions at each point where reduced in size, stating miles from headgate:

(At....) Width on top (at water-line)feet; width on bottomfeet; depth of waterfeet; gradefeet per mile. (At....) Width on top (at water-line)feet; width on bottomfeet; depth of waterfeet; gradefeet per mile.

8. Describe the character of proposed works, stating: 1st. The nature of the material to be moved. 2nd Number and length of tunnels, if any. 3rd. Amount of fluming, if any.

1. Earth. 2. No tunnels. 3. A 20 foot flume across north Branch Bitter Creek and 36 foot flume across Distributary 13-C of the U. S. Shoshone Reclamation Project.

9. The estimated cost of said enlargement is Three Hundred (\$300.00) Dollars.

10. The land to be irrigated has a total area of four hundred three (403) acres, described as follows: (Give estimated acreage in fractions of subdivisions)

Christopher Althoff:—

11.5 acres $NW\frac{1}{4}NW\frac{1}{4}$ of Lot No. 37, of Resurvey T. 56 N. R. 99W. of 6th PM

39.5 acres $SW\frac{1}{4}NW\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56 N. R. 99W. of 6th PM

30.0 acres $NE\frac{1}{4}NW\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56 N. R. 99W. of 6th PM

40.0 acres $SE\frac{1}{4}NW\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56 N. R. 99W. of 6th PM

40.0 acres NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56
N. R. 99W. of 6th PM

4.0 acres SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Lot No. 37 of Resurvey T. 56
N. R. 99W. of 6th PM

165.0 Total acreage of Christopher Althoff.

Charles G. Caldwell and Daniel H. Bagley, as undivided
one half interest, and being assignees of H. A. Bull and

Charles E. Wetmore:—

543 40.0 acres NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

40.0 acres NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

40.0 acres SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

40.0 acres SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

40.0 acres NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

36.0 acres NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

2.0 acres SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Lot No. 37 of Resurvey T.
56N. R. 99W. of 6th PM

238.0 Total acreage of Caldwell and Bagley

11. Construction of the proposed enlargement or extension
will begin within one year from date of approval of this ap-
plication.

12. The time required for the completion of enlargement
or extension is two (2) years from date of approval of this
application.

13. The time required to complete the application of water
to the beneficial use stated in this application is four (4)
years from date of approval of this application.

14. A map in duplicate, prepared in accordance with the provisions of Section 35 of the Water Laws, accompanies this application.

Signed: RUSSELL KIMBALL
Wyoming State License No. 38

Note.—The statements in the foregoing application must comply with the requirements of Chapter 14, R. S. 1899.

Note.—Before applications for the enlargement of ditches can be approved, the written consent of the owners of such ditches must be secured, and this must accompany the application.

The State of Wyoming, } ss.
County of Park.

I hereby certify that the foregoing application was signed in my presence and sworn to before me by Russell Kimball, this 22 day of April 1915,

OTTO F. KOENIG
Notary Public

Seal

My commission expires March 18, 1917

Notices of expiration mailed Oct. 1, 1917

544 Notice of completion received Oct. 9, 1917

Proof submitted Nov. 1917

The State of Wyoming } ss.
State Engineer's Office.

This is to certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions: no backwater above diversion dam shall be permitted which shall interfere with drainage of surrounding lands. This permit grants only the right to use surplus water of the stream when all prior rights are satisfied.

Work will begin within one year from date of approval.

The time for completing construction shall terminate December 31, 1917.

The time for completing the appropriation of water for beneficial use shall terminate December 31, 1919.

The amount of the appropriation shall be limited to one cubic foot per second of time for each seventy acres of land reclaimed on or before December 31st, 1919, and the additional volume applied to domestic and livestock purposes on or before that date.

Witness my hand this 10th day of June, A. D. 1915.

JAS. B. TRUE,
State Engineer.

545 Defendants' Exhibit F-1 is a duly certified copy of the final certificate of appropriation issued to Art R. Thornburg under Permit 3173 Enlg. as the same appears of record in the office of the Board of Control in Book 39, page 161; and is as follows:

546 The State of Wyoming
Certificate of Appropriation of Water

Certificate Record No. 39

Page 161

Whereas Art R. Thornburg has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshoni River through the Bitter Creek No. 1 Ditch Enl. of Per. No. 10162 Ditch under Permit No. 3173 Enl. for irrigation of the lands herein described, lying and being in Park County, Wyoming.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 30th day of November A. D. 1917, in Order Record No. 5 Page 379, determined and established the priority and amount of such appropriation as follows:

Name of Appropriator Art R. Thornburg; Postoffice Address Powell, Wyoming; Amount of Appropriation .06 cu. ft. per sec.; Date of Appropriation May 3, 1915; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage Four (4) acres

4 A. NE $\frac{1}{4}$ SE $\frac{1}{4}$ Lot 37, T. 56 N. R. 99 W.

The right to water hereby confirmed and established is limited to irrigation and the use is restricted to the

place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

547 In Testimony Whereof, I, Jas. B. True, President of the State Board of Control, have hereunto set my hand this 11th day of March, A. D. 1918, and caused the seal of said Board to be hereunto affixed.

JAS. B. TRUE,
President

Attest:

FLORENCE L. MILLER,
Secretary

548 Defendants' Exhibit F-2 is a duly certified copy of the final certificate of appropriation issued to Chr. Althoff under Permit 3173 Enlg. as the same appears of record in the office of the Board of Control of the State of Wyoming in Book 39, page 160, and is as follows:

549 The State of Wyoming

Certificate of Appropriation of Water

Certificate Record No. 39 Page 160

Whereas, Chr. Althoff has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshoni River through the Bitter Creek No. 1. Eln. of Per. No. 10162 Ditch under Permit No. 3173 Enl. for irrigation of the lands herein described, lying and being in Park County, Wyoming.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 30th day of November A. D. 1917, in Order Record No. 5, Page 378, determined and established the priority and amount of such appropriation as follows:

Name of Appropriator Chr. Althoff; Postoffice Address Powell, Wyoming; Amount of Appropriation .51 cu. ft. per sec.; Date of Appropriation May 3, 1915; Description of land

to be irrigated and for which this appropriation is determined and established; Total Acreage Thirty-six (36) acres

36 A. SE $\frac{1}{4}$ SW $\frac{1}{4}$ Lot 37, T. 56 N. R. 99 W.

550 The right to water hereby confirmed and established is limited to irrigation—and the use is restricted to the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, Jas. B. True, President of the State Board of Control, have hereunto set my hand this 11th day of March A. D. 1918, and caused the seal of said Board to be hereunto affixed.

JAS. B. TRUE,
President

Attest:

FLORENCE L. MILLER,
Secretary

551 Defendants' Exhibit G-1 is a duly certified copy of the final certificate of appropriation issued to Chr. Althoff under Permit 3174 Enlg. as the same appears in the office of the Board of Control of the State of Wyoming, in Book 39, page 162; and is as follows:

The State of Wyoming

552 Certificate of Appropriation of Water
Certificate Record No. 39 Page 162

Whereas, Chr. Althoff has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshoni River through the Bitter Creek No. 2 Enl. No. 19163 Ditch under Permit No. 3174 Enl. for irrigation of the lands herein described, lying and being in Park County, Wyoming.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 30th day of November A.D. 1917, in Order Record No. 5, Page 379; de-

terminated and established the priority and amount of such appropriation as follows:

Name of Appropriator Chr. Althoff; Post office Address Powell, Wyoming; Amount of Appropriation 2.35 cu. ft. per sec.; Date of Appropriation May 3, 1915; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage One Hundred Sixty-five (165) acres

30	A. NE $\frac{1}{4}$ NW $\frac{1}{4}$	Lot 37, T. 56 N.R. 99 W.
11.5	A. NW $\frac{1}{4}$ NW $\frac{1}{4}$	Lot 37, T. 56 N.R. 99 W.
39.5	A. SW $\frac{1}{4}$ NW $\frac{1}{4}$	Lot 37, T. 56 N.R. 99 W.
40	A. SE $\frac{1}{4}$ NW $\frac{1}{4}$	Lot 37, T. 56 N.R. 99 W.
40	A. NE $\frac{1}{4}$ SW $\frac{1}{4}$	Lot 37, T. 56 N.R. 99 W.
4	A. SE $\frac{1}{4}$ SW $\frac{1}{4}$	Lot 37, T. 56 N.R. 99 W.

165 A. Total acreage

553 The right to water hereby confirmed and established is limited to irrigation—and the use is restricted to the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, Jas. B. True, President of the State Board of Control, have hereunto set my hand this 11th day of March, A.D. 1918, and caused the seal of said Board to be hereunto affixed.

JAS. B. TRUE, President

Attest: FLORENCE L. MILLER, Secretary

554 Defendants' Exhibit H-1, is a duly certified copy of the final certificate of appropriation issued to Art R. Thornburg under Permit 3174, Enlg. as the same appears of record in the office of the Board of Control of the State of Wyoming in Book 39, page 165, and is as follows:

The State of Wyoming

555 Certificate of Appropriation of Water

Certificate Record No. 39 Page 165

Whereas, Art R. Thornburg has presented to the Board of Control of the State of Wyoming proof of the appropria-

tion of water from Bitter Creek tributary of Shoshoni River through the Bitter Creek No. 2 Enl. Per. No. 10163 Ditch under Permit No. 3174 Enl. for irrigation of the lands herein described, lying and being in Park County, Wyoming.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 30th day of November, A.D. 1917, in Order Record No. 5, Page 379, determined and established the priority and amount of such appropriation as follows:

Name of Appropriator Art R. Thornburg; Post Office Address Powell Wyoming; Amount of Appropriation 1.08 cu. ft. per sec.; Date of Appropriation May 3, 1915; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage Seventy-six (76) acres

40 A. NW $\frac{1}{4}$ SE $\frac{1}{4}$ Lot 37, T. 56 N. R. 99 W.

36 A. NE $\frac{1}{4}$ SE $\frac{1}{4}$ Lot 37, T. 56 N. R. 99 W.

76 A. Total acreage

556 The right to water hereby confirmed and established is limited to irrigation—and the use is restricted to the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, Jas. B. True, President of the State Board of Control, have hereunto set my hand this 11th day of March, A. D. 1918, and caused the seal of said Board to be hereunto affixed.

JAS. B. TRUE, President

Attest:

FLORENCE L. MILLER, Secretary

557 Defendants' Exhibit I-1 is a duly certified copy of the final certificate of appropriation issued to Daniel H. Bagley under Permit 3174, Enlg. as the same appears of record in the office of the Board of Control of the State of Wyoming, in Book 39, page 163, and is as follows:

The State of Wyoming

558 Certificate of Appropriation of Water

Certificate Record No. 39, Page 163

Whereas, Daniel H. Bagley has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshoni River through the Bitter Cr. No. 2 Enl. No. 10163 Ditch under Permit No. 3174 Enl. for irrigation of the lands herein described, lying and being in Park County, Wyoming.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 30th day of November, A.D. 1917, in Order Record No. 5, Page 379, determined and established the priority and amount of such appropriation as follows:

Name of Appropriator Daniel H. Bagley; Postoffice Address Powell, Wyoming; Amount of Appropriation 1.14 cu. ft. per sec.; Date of Appropriation May 3, 1915; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage Eighty (80) Acres

40 A. NW $\frac{1}{4}$ NE $\frac{1}{4}$ Lot 37, T. 56 N.R. 99 W.

40 A. NE $\frac{1}{4}$ NE $\frac{1}{4}$ Lot 37, T. 56 N.R. 99 W.

80 A. Total acreage

559 The right to water hereby confirmed and established is limited to irrigation—and the use is restricted to the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, Jas. B. True, President of the State Board of Control, have hereunto set my hand this

11th day of March, A. D. 1918, and caused the seal of said Board to be hereunto affixed.

JAS. B. TRUE, President

Attest:

FLORENCE L. MILLER, Secretary

560 Defendants' Exhibit K-1 is a duly certified copy of the final certificate of appropriation issued to Alvin C. Sinclair under Permit 3174 Enlg. as the same appears of record in the office of the Board of Control of the State of Wyoming in Book 39, page 164, and is as follows:

The State of Wyoming

561 Certificate of Appropriation of Water
Certificate Record No. 39, Page 164

Whereas, Alvin C. Sinclair has presented to the Board of Control of the State of Wyoming proof of the appropriation of water from Bitter Creek tributary of Shoshoni River through the Bitter Creek No. 2 Enl. of Per. No. 10163 Ditch under Permit No. 3174 Enl. for irrigation of the lands herein described, lying and being in Park County, Wyoming.

Now Know Ye, That the Board of Control, under the provisions of Chapter 61, Compiled Statutes of Wyoming, 1910, has, by an order duly made and entered on the 30th day of November, A.D.1917, in Order Record No. 5, Page 379, determined and established the priority and amount of such appropriation as follows:

Name of Appropriator Alvin C. Sinclair; Postoffice Address Powell, Wyoming; Amount of Appropriations 1.14 cu. ft. per sec.; Date of Appropriation May 3, 1915; Description of land to be irrigated and for which this appropriation is determined and established; Total Acreage Eighty (80) Acres

40 A. SE $\frac{1}{4}$ NE $\frac{1}{4}$ Lot 37, T. 56 N.R. 99W.
40 A. SW $\frac{1}{4}$ NE $\frac{1}{4}$ Lot 37, T. 56 N.R. 99W.

80 A. Total acreage

562 The right to water hereby confirmed and established is limited to irrigation and the use is restricted to

the place where acquired and to the purpose for which acquired; rights for irrigation not to exceed one cubic foot per second for each seventy acres of land for which appropriation is herein determined and established.

In Testimony Whereof, I, Jas. B. True, President of the State Board of Control, have hereunto set my hand this 11th day of March, A. D. 1918, and caused the seal of said Board to be hereunto affixed.

JAS. B. TRUE, President

Attest: FLORENCE L. MILLER, Secretary

563 The plaintiff and defendants then rested their case.

(Statement by the Court.)

By the Court: I think it is established that this creek flowed and was a running stream from the last part of February or the first of March until about the first of May, and was then dry until the Reclamation Service opened their ditch, and then the seepage water caused it again to become a flowing stream. So that it really resolves itself down to the question whether by their appropriation for certain purposes, the Reclamation Service could after they found that from leakage of ditches, seepage waterlogged their ground to such an extent that they had to put in drainage and carry the water into this Bitter Creek and used that as a drainage channel, and this water was recaptured by somebody else who had an appropriation in the State or from the State Engineer's office under the state law,—whether or not the original appropriation carried on not only for the purpose that the Reclamation Service designated in their first appropriation but whether their title continued to that water after they had used it, and it flowed away and they put in drain pipes for the purpose of carrying it off. It is recaptured again by Mr. Caldwell under his appropriation—whether they could deprive him of its use to irrigate land in an entirely different section of the country, that is the question of law. Mr. [Caldwell] gave the court more information than any other witness on the stand. He was frank and fair. He said this stream was a flowing stream from right along about the first of March on to the last part of April or May, then it dries out until the Reclamation Service begins to use its ditches and then drains

from these lands would again make it a flowing stream. His statement clears the situation very much for the Court. The engineer we had on in the morning and took two hours to examine did not answer a single question directly. He argued everything. So I think it would be difficult for
564 the Court to get much from his testimony. I think the testimony taken as a whole established just that situation as far as the facts are concerned.

Now the question of law is after they had once parted with the water and drained it off the land, they intended to use it on for irrigation purposes, and put it into this dry stream or dry bed of the creek, which was dry at that time, according to Mr. Caldwell's testimony, usually about the first of May, about the time they turned their water into the ditches, then it became a flowing stream in the summer. He had an appropriation granted by the state. The question is whether the state had the power to grant a water right to such a stream, and second, whether the Reclamation Service had not parted with their title, water being personal property; whether they had not parted with their title when they used it for the purpose of irrigation. When they found it necessary to drain it did their title continue in it sufficient to deprive him of his right under such appropriation. The two together make a flowing stream of it, that is a natural flow from melting snow which is there from March 1st until about the last of April or the first of May, and then unless the Reclamation Service turns water into their ditches it became a dry stream, this is about the time they turned their water in. Then this seepage water or drainage water made it a flowing stream, so it became a flowing stream the year around during the irrigation season. These are the questions I want you gentlemen to argue. I don't think there is much trouble about the facts, both sides agreeing with the exception of one or two witnesses, who testified that they never saw any water in there at all prior to the construction of the irrigation system, but I am inclined
565 to accept the testimony that there was water running in that stream from around March first until about the last of April, that is from melting snow.

These are the questions you want to argue, unless there is something in these depositions different from the other testimony, I think the facts are narrowed down to that so that it becomes a question of law as to whether the Reclamation Service has title to that water after they turned it

in and drained it off in their drains—whether they had a right to carry the water down below and deprive a man who had secured a water right from the State of Wyoming.

566 (Stipulation for the approval of the Statement
of Evidence, etc.)

It is hereby stipulated and agreed that the foregoing statement of the evidence under equity rule 75 is true, complete and properly prepared, and that the same may be approved by the Court or Judge.

CHARLES L. RIGDON
Solicitor for Plaintiff.

WILLIAM B. ROSS
AVERY HAGGARD
W. E. MULLEN
Solicitors for Defendants.

(Approval of the Statement of the Evidence.)

I hereby certify that the foregoing statement of the evidence under equity rule 75 is true, complete and properly prepared, and the same is accordingly approved by me this 23rd day of August, 1920.

JOHN A. RINER
Judge.

568 (Stipulation for Praeipe for transcript and as
to the transmission of original exhibits
to the appellate court.)

It Is Hereby Stipulated and Agreed by and between the parties to the above entitled cause that the transcript of record herein shall include the following;

Bill of Complaint;
Subpoena and return;
Order of Court setting hearing temporary injunction;
Notice of hearing on temporary injunction;
Order of temporary injunction;
Motion of Ide to dismiss bill;

Separate answer of Arthur W. Ide;
Stipulation extending Caldwell's time to answer;
Separate Answer of Charles G. Caldwell;
Notice to Rigdon and Egleston, August 24, 1918;
Motion of Caldwell for injunction, August 24, 1918;
Notice by Caldwell of motion to vacate injunction;
Motion of Caldwell to vacate injunction;
Notice by Ide to plaintiff for injunction, filed August 28, 1918;
Motion by Ide for injunction filed August 28, 1918;
Notice to plaintiff by Ide to vacate injunction, filed August 28, 1918;
Motion by Ide filed August 28, 1918, for dissolving injunction;
Letter to Egleston from Sanford;
Letter to Egleston from Iakisch;
Letter to Egleston from Jump;
Affidavit Egleston; Affidavit Williams;
Affidavit Ide; Affidavit Caldwell;
Affidavit Kysar; Affidavit Townsley;
Affidavit Woodruff;
Stipulation as to payment of damages;
Order overruling motion to dissolve;
Answer of Althoff;
Answer of Thornburg;
Answer of Kysar and Townsley;
Answer of Agnes H. Caldwell;
Order allowing new defendants to intervene, filed January 28, 1919;
Reply to answer of Ide;
Reply to answer of Caldwell;
Reply to answer of Althoff;
Reply to answer of Thornburg;
Reply to answer of Kysar and Townsley;
Reply to answer of Agnes H. Caldwell;
Judge's Memorandum filed November 20, 1919;
Decree filed November 20, 1919;
Statement of plaintiff filed March 27, 1920;
Decree filed March 31, 1920;
Petition for appeal;
Assignments of error;
Order allowing appeal;
Citation on appeal;
Petition for extension of time for Court of Appeals;

Order extending time for docketing case in Court of Appeals;

Election as to printing;

Narrative statement of testimony;

This stipulation;

[Precipe] for Transcript and Proof of Service.

It Is Hereby Further Stipulated that the above is without prejudice to either party to have any other portions of the evidence or record certified up, if it should be necessary.

It Is Further Stipulated that plaintiff's map Exhibit "20" and defendants' map Exhibit "O" and other maps, photographs or diagrams, may be forwarded to the Marshal of the United States Circuit Court of Appeals, Eighth Circuit, before the date of hearing, under the provisions of Rule 34 of said Court.

CHARLES L. RIGDON,
Solicitor for Plaintiff.

WILLIAM E. MULLEN.
AVERY HAGGARD.
WILLIAM B. ROSS,
Solicitors for Defendants.

Endorsed: Filed in the District Court on August 24, 1920.

(Praecipe for Transcript.)

570 To the Clerk of said Court:

You will please prepare a duly authenticated transcript of the entire record in the above entitled cause for an appeal to the United States Circuit Court of Appeals for the Eighth Circuit, excluding the formal and immaterial parts of all exhibits, documents and other papers introduced therein, in accordance with Rule 76, to wit:

Bill of Complaint;

Subpoena and return;

Order of Court setting hearing temporary injunction;

Notice of hearing on temporary injunction;

Order of temporary injunction;

Motion of Ide to dismiss bill;

Separate answer of Arthur W. Ide;

Stipulation extending Caldwell's time to answer;

Separate Answer of Charles G. Caldwell;

- Notice to Rigdon and Egleston, August 24, 1918;
Motion of Caldwell for injunction, August 24, 1918;
Notice by Caldwell of motion to vacate injunction;
Motion of Caldwell to vacate injunction;
Notice by Ide to plaintiff for injunction, filed August 28, 1918;
Motion by Ide for injunction filed August 28, 1918;
Notice to plaintiff by Ide to vacate injunction, filed August 28, 1918;
Motion by Ide filed August 28, 1918, for dissolving injunction;
Letter to Egleston from Sanford;
Letter to Egleston from Iakisch;
Letter to Egleston from Jump;
Affidavit Egleston; Affidavit Williams;
Affidavit Ide; Affidavit Caldwell;
Affidavit Kysar; Affidavit Townsley;
Affidavit Woodruff;
Stipulation as to payment of damages;
Order overruling motion to dissolve;
Answer of Althoff;
Answer of Thornburg;
571 Answer of Kysar and Townsley;
Answer of Agnes H. Caldwell;
Order allowing new defendants to intervene, filed January 28, 1919;
Reply to answer of Ide;
Reply to answer of Caldwell;
Reply to answer of Althoff;
Reply to answer of Thornburg;
Reply to answer of Kysar and Townsley;
Reply to answer of Agnes H. Caldwell;
Judge's Memorandum filed November 20, 1919;
Decree filed November 20, 1919;
Statement of plaintiff filed March 27, 1920;
Decree filed March 31, 1920;
Petition for appeal;
Assignments of error;
Order allowing appeal;
Citation on appeal;
Petition for extension of time for Court of Appeals;
Order extending time for docketing case in Court of Appeals;
Election as to printing;

Narrative statement of testimony;
Stipulation for [Precipe], and
This [Precipe], and proof of service.

C. L. RIGDON,
United States Attorney for the
District of Wyoming, So-
licitor for Plaintiff.

Due and legal service of the within [Precipe] and receipt of a copy thereof is hereby acknowledged at Cheyenne, Wyoming, this 23rd day of August, A. D. 1920.

WILLIAM E. MULLEN,
AVERY HAGGARD,
WILLIAM B. ROSS,
Solicitors for Defendants.

Endorsed: Filed in the District Court on August 24, 1920.

572 (Clerk's Certificate to Transcript.)

United States of America, }
District of Wyoming. } ss.

I, Charles J. Ohnhaus, Clerk of the District Court of the United States for the District of Wyoming, do hereby certify the above and foregoing pages (1) to (573), both inclusive, to be a true, correct and complete transcript and copy of the

Bill of Complaint;
Subpoena and return;
Order of Court setting hearing temporary injunction;
Notice of hearing on temporary injunction;
Order of temporary injunction;
Motion of Ide to dismiss bill;
Separate answer of Arthur W. Ide;
Stipulation extending Caldwell's time to answer;
Separate Answer of Charles G. Caldwell;
Notice to Rigdon and Eggleston, August [14,] 1918;
Motion of Caldwell for injunction, August 24, 1918;
Notice by Caldwell of motion to vacate injunction;
Motion of Caldwell to vacate injunction;
Notice by Ide to plaintiff for injunction, filed August 28, 1918;
Motion by Ide for injunction filed August 28, 1918;

Notice to plaintiff by Ide to vacate injunction, filed
 August 28, 1918;
 Motion by Ide filed August 28, 1918, for dissolving
 injunction;
 Letter to Eggleston from Sanford;
 Letter to Eggleston from Iakisch;
 Letter to Eggleston from Jump;
 Affidavit Eggleston; Affidavit Williams;
 Affidavit Ide; Affidavit Caldwell;
 Affidavit Kysar; Affidavit Townsley;
 Affidavit Woodruff;
 Stipulation as to payment of damages;
 Order overruling motion to dissolve;
 Answer of Althoff;
 Answer of Thornburg;
 Answer of Kysar and Townsley;
 Answer of Agnes H. Caldwell;
 Order allowing new defendants to intervene, filed Jan-
 uary 28, 1919;
 Reply to answer of Ide;
 Reply to answer of Caldwell;
 Reply to answer of Althoff;
 Reply to answer of Thornburg;
 Reply to answer of Kysar and Townsley;
 Reply to answer of Agnes H. Caldwell;
 Judge's Memorandum filed November 20, 1919;
 Decree filed November 20, 1919;
 Statement of plaintiff filed March 27, 1920;
 Decree filed March 31, 1920;
 Petition for appeal;
 Assignments of error;
 Order allowing appeal;
 Citation on appeal;
 Petition for extension of time for Court of Appeals;
 Order extending time for docketing case in Court of
 Appeals;
 Election as to printing;
 Narrative statement of testimony;
 Stipulation for [Precipe], and
 [Precipe], and proof of Service
 in case No. 984, Civil, United States of America, Plain-
 tiff, vs. Arthur W. Ide; Charles Grant Caldwell and
 H. B. Loomis, Defendants, Christopher Althoff; Arthur R.
 Thornburg; Earl Kysar; D. E. Townsley and Agnes H. Cald-
 well, Intervenors, lately pending in this court.

In Testimony, to the above I do hereto sign my name and affix the seal of said court, at Cheyenne, in said district, this 4th day of September, A. D. 1920.

(Seal)

CHARLES J. OHNHAUS
Clerk of the District Court of the United
States for the District of Wyoming.

Filed
Sep—7 1920
E. E. KOCH
Clerk

574 (Stipulation as to printing record and [and] as
to filing briefs, etc.)

In the

United States Circuit Court of Appeals
Eighth Circuit

Frank E. Weymouth, et al,	Appellants,	} No. 5703.
vs.		
The Lincoln Land Company, et al,	Appellees.	}

The United States of America,	[Appellants],	} No. 5704.
vs.		
Arthur W. Ide, et al,	Appellees.	}

The parties hereto by their respective solicitors, having at the trial of these causes in the lower Court stipulated in open court that the evidence and exhibits introduced in cause No. 5704, and entitled The United States of America, Appellant, v. Arthur W. Ide, et al, Appellees, then being tried in said lower court, should be taken and considered as the evidence and exhibits for both causes, and complete records having been transmitted to this Court in both of these causes in which the condensed statement of evidence and the exhibits in both causes, to-wit: 5703 and 5704 are iden-

tical; and as it is desirous that the two causes may be consolidated in this court for the purpose of one hearing and consideration, it is hereby stipulated and agreed that the condensed statement of evidence and exhibits in said cause numbered 5704, as far as the same are applicable, shall
575 be taken and considered as the condensed statement of evidence and exhibits in cause numbered 5703, and that the condensed statement of evidence and exhibits in cause numbered 5703 shall be omitted in the printed record in said cause; and also that each printed brief filed by the parties in said causes 5703 and 5704 shall cover both causes, and that the printed briefs shall be filed only in cause numbered 5704, which shall be taken and considered in said cause numbered 5703, and that the said causes may be consolidated and heard, considered and determined together.

CHARLES L. RIGDON

United States Attorney, Solicitor
for Appellants in causes
5703 and 5704.

AVERY HAGGARD

WM. B. ROSS

WM. E. MULLEN

[Solicitor] for Appellees in causes 5703 and
5704.

Endorsed: Filed in the U. S. Circuit Court of Appeals, Sep.
18, 1920.

And thereafter the following proceedings were had in said cause in the Circuit Court of Appeals, viz:

(Appearance of Mr. C. L. Rigdon, Former U. S. Attorney, and Mr. Ethelbert Ward, Special Assistant to the Attorney General, as Counsel for the Appellant.)

United States Circuit Court of Appeals, Eighth Circuit.

No. 5704.

THE UNITED STATES OF AMERICA, Appellant,

vs.

ARTHUR W. IDE et al.

The Clerk will enter my appearance as Counsel for the Appellant.

C. L. RIGDON,

*United States Attorney,
Cheyenne, Wyoming.*

ETHELBERT WARD,

*Special Assistant to the Attorney General,
230 Post Office Bldg., Denver, Colorado.*

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Sep. 25, 1920.

(Appearance of Mr. Albert D. Walton, U. S. Attorney, as Counsel for the Appellant.)

The Clerk will enter my appearance as Counsel for the Appellant.

ALBERT D. WALTON,

United States Attorney for the District of Wyoming.

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Sep. 8, 1921.

(Appearance of Mr. Willis J. Egleston, District Counsel, U. S. Reclamation Service, as Counsel for the Appellant.)

The Clerk will enter my appearance as Counsel for the Appellant.

WILLIS J. EGLESTON,

*District Counsel, U. S. Reclamation Service,
Helena, Montana.*

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Sep. 9, 1921.

(Appearance of Mr. William B. Ross and Mr. Avery Haggard as Counsel for the Appellees.)

The Clerk will enter our appearance as Counsel for the Appellees
WILLIAM B. ROSS,
Cheyenne, Wyoming.
AVERY HAGGARD,
Cheyenne, Wyoming.

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Sep. 22, 1920.

(Appearance of Mr. W. E. Mullen as Counsel for the Appellee Arthur W. Ide.)

The Clerk will enter my appearance as Counsel for the Appellee, Arthur W. Ide.

W. E. MULLEN,
Attorney for Appellee Arthur W. Ide.

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Sep. 7, 1921.

(Order of Argument.)

September Term, 1921, Thursday, September 8, 1921.

No. 5703.

FRANK E. WEYMOUTH et al., Appellants,

vs.

THE LINCOLN LAND COMPANY et al.

Appeal from the District Court of the United States for the District of Wyoming.

No. 5704.

UNITED STATES OF AMERICA, Appellant,

vs.

ARTHUR W. IDE et al.

Appeal from the District Court of the United States for the District of Wyoming.

These causes, Nos. 5703 and 5704, having been called for hearing in their regular order, the same are argued together by agreement of counsel; argument was commenced by Mr. Albert D. Walton

United States Attorney, for appellants and the hour for adjournment having arrived further argument was postponed until tomorrow.

(Order of Submission.)

September Term, 1921, Friday, September 9, 1921.

These causes, Nos. 5703 and 5704, having been called for further hearing, argument was resumed by Mr. Albert D. Walton, United States Attorney, for the appellants, continued by Mr. Avery Haggard for appellees and concluded by Mr. Ethelbert Ward, Special Assistant to the Attorney General, for appellants.

Thereupon, these causes were submitted to the Court on the transcripts of the records from the said District Court and the briefs of counsel filed herein.

(Opinion.)

United States Circuit Court of Appeals, Eighth Circuit.

No. 5704, December Term, A. D. 1921.

UNITED STATES OF AMERICA, Appellant,

vs.

ARTHUR W. IDE et al., Appellees.

Appeal from the District Court of the United States for the District of Wyoming.

Mr. Ethelbert Ward, Special Assistant to the Attorney General, and Mr. Albert D. Walton, United States Attorney (Mr. Willis J. Egleston, District Counsel, United States Reclamation Service, and Mr. Clyde M. Watts, Assistant United States Attorney, were with them on the brief), for appellant.

Mr. Avery Haggard (Mr. William B. Ross was with him on the brief), for appellees.

Before Carland, Circuit Judge, and Youmans and Johnson, District Judges.

Statement.

This is an action commenced July 3, 1918, by the appellant against appellees for the purpose of enjoining them from interfering with the construction of a ditch in connection with appellant's Shoshone Reclamation Project located in the State of Wyoming. The parties hereafter will be referred to as they were in the trial court. The original defendants were Arthur W. Ide, Charles Grant Caldwell and H. B. Loomis. On motion Christopher Althoff, Arthur R. Thornberg, Earl Kysar, D. E. Towsnley and Agnes H. Caldwell,

were allowed to intervene as parties defendant. The defendants filed separate answers to the complainant of the plaintiff and by way of counterclaim prayed that the plaintiff be enjoined from constructing the ditch above mentioned and from performing any acts that would injure defendants' lands and water rights located along said proposed ditch. Judgment for damages for trespasses already committed was also asked. On final hearing upon pleadings and proofs the trial court granted the defendants, damages in the aggregate sum of \$3,150, dismissed plaintiff's complaint, and enjoined plaintiff and its officers, agents, employees, and representatives from interfering in any way with defendants' appropriation and use of the waters of Bitter Creek, so called, for the purpose of irrigating their lands, and from constructing or maintaining any ditches or other works which would destroy or interfere with the maintenance and use by defendants of diversion drains, ditches, and other means of conveying water from Bitter Creek to defendants' lands for irrigation purposes. It was further adjudged and decreed that if the plaintiff should within thirty days from the date of the decree file in the cause its election to furnish each of the defendants, other than A. W. Ide, a perpetual water right for the irrigation of their lands, and at the same time file a proper instrument in writing conveying without cost to each of said defendants other than defendant A. W. Ide, perpetual water rights for the irrigation of their respective holdings of land in an amount equal to their respective appropriations of water from Bitter Creek as evidenced by their water permits granted by the State of Wyoming, then the defendants should be enjoined from interfering with the plaintiff's construction of said ditch and the diversion and use of water therefrom. The plaintiff filed no election within the time allowed therefor and a decree was entered as above stated. From this decree plaintiff appealed. A proper understanding of the case requires a statement as brief as maybe, of the facts as they appear from the record. Plaintiff on the 17th day of June (date of the approval of the Reclamation Act, 32 Stat. 388), was the owner of 1,000,000 acres of land situated in Big Horn County, Wyoming, a part of said county now being embraced in the County of Park. Through these lands flowed the Shoshone River. On and before the date aforesaid these lands were vacant lands, arid in character, and incapable of producing agricultural crops without artificial irrigation. The only source from which water could be obtained to irrigate these lands was the above named river, the natural flow of which during the crop growing season varied from a few hundred second feet to several thousand second feet in time of flood. April 21, 1903, March 11, 1904, and April 15, 1904, the Secretary of the Interior under the authority of the Reclamation Act, above mentioned, withdrew from all forms of entry and sale except under the Homestead laws the public lands in said County of Big Horn. On February 10, 1904, said Secretary, acting under the authority of the same Act, authorized and immediately began the carrying out of a reclamation project to be known as the Shoshone Project, and which should embrace the lands so withdrawn

from entry. The work upon the construction of said project has continued from the date last mentioned till the present time.

A sum in excess of \$5,328,000 has so far been expended in the construction of reservoirs, dams, ditches, laterals, and in necessary surveys, and it is estimated that an expenditure of \$5,000,000 will be required to complete said project. The principal engineering features of said reclamation project thus far constructed consists of the Shoshone storage reservoir, situated in the County of Park above mentioned with a storage capacity of 456,000 acre feet, completed at an expenditure of \$1,364,000. The storage water coming from the Shoshone River into said reservoir is carried down said river as a carrying channel and diverted at or near Corbett in said County of Park, and will be diverted at other points along the river. The diversion dam at Corbett is a substantial concrete structure across the Shoshone River constructed at an expenditure of \$97,000. Its purpose is to divert water into the Corbett tunnel and thence into the Garland Canal. The tunnel diverts about 1,000 cubic feet of water per second of time from the Shoshone River. The canal is 50 miles in length, has 286 miles of lateral ditches and a capacity of irrigating 82,000 acres of land on the north side of the Shoshone River. Water was applied to the irrigation of the lands of the project in the summer of 1908, and has been applied to more and more lands until at the commencement of this litigation 55,380 acres of lands under the Garland Canal were being irrigated. The total amount of land which will be irrigated when the project is completed will be 150,000 acres. In 1899, there was segregated to the State of Wyoming by plaintiff under the provisions of the Act of August 18, 1894 (28 Stat. 422), known as the "Cary Act," a tract of land of about 60,000 acres. This segregation was approved by the Interior Department June 9, 1901. May 22, 1899, the state engineer of Wyoming issued a permit to Cody and Salisbury for the diverting of water from the Shoshone River in an amount sufficient to irrigate this tract of 60,000 acres of arid land with a limitation of one cubic foot per second of time for each 70 acres of land reclaimed. January 26, 1903, the Governor of Wyoming requested the plaintiff to take a relinquishment from the state of said tract of segregated land and an assignment of said water permit so that plaintiff could irrigate and reclaim said land. The plaintiff accepted a transfer of said land and an assignment of the water permit. The tract of 60,000 acres so segregated by plaintiff to the State of Wyoming and received back as above stated embraced and included the lands of defendants. March 5, 1904, plaintiff filed in the office of the state engineer of Wyoming an application in due form for a permit in conformity to the laws of said State for the construction of the Shoshone reservoir, which application was duly granted. March 28, 1904, plaintiff filed in the same office an application in due form for a permit in conformity with the laws of said State to construct the Garland Canal, which application was duly allowed. On January 3, 1910, plaintiff filed in conformity with the laws of said State an application for a permit in due form for the construction and operation, among others of the Garland Canal and distri-

bution system, and a notice of the withdrawal, reservation, and utilization by the plaintiff of its surplus and unappropriated waters for the reclamation purposes of the Shoshone Project. This application was duly allowed by the proper officials of the State of Wyoming with a priority dating back to May 22, 1899, the date of the permit to Cody and Salisbury. The various permits granted by the State of Wyoming to the plaintiff cover the lands of defendants here in controversy.

Prior to the year 1908, plaintiff constructed as a part of its said project the Garland Canal and several laterals above and around the Garland division of the Shoshone Project. Beginning with the year 1908, the water of the plaintiff was run through the Garland Canal and the laterals around and above said area and the lands therein were supplied with water for irrigation. Immediately upon the carrying of water into plaintiff's Garland Canal around and above the drainage line called Bitter Creek and the application of irrigation water from said canal and laterals, to the lands situated in the vicinity thereof waste, return, percolating, and seep water, began to appear in portions of said Bitter Creek to such an extent that an increasing and continuous stream was created. Adjacent areas of land in the vicinity became saturated and required drainage in order to retain their productivity and to secure the highest agricultural returns. Beginning in the year of 1910, in furtherance of said project and for carrying out the express purposes thereof, and in contemplation of the condition heretofore described and to develop and collect water on said project and to drain waterlogged land, and to utilize said waste, percolated and seepage water, and in accordance with notices theretofore given as above stated plaintiff found it necessary to construct in the vicinity of Bitter Creek a large and deep drainage ditch for developing and collecting waste percolating and seepage waters resulting from the irrigation with plaintiff's water of lands under said project. The natural lines of drainage for said project included and involved the use of Bitter Creek as a drainage line and the plans of the proposed drainage system contemplated such use. Construction work was begun and continued with Bitter Creek as a main trunk drain and the plans for construction of drains and the actual construction thereof have not been changed or interrupted, except by state officials of Wyoming acting at the instance of defendants.

Since 1910, the plaintiff has constructed additional drains for the reclamation of seeped lands and to utilize the waste and drainage water for the irrigation and reclamation of the lands of the project and to put said drainage waters to beneficial use. By the construction of additional drains the amount of water in Bitter Creek has increased and at the commencement of this litigation more than 22 second feet of water was being applied to beneficial use. Plaintiff plans to divert and use to irrigate the project lands about 110 second feet at the time of final drainage development.

Defendant Ide owns a homestead consisting of Lot 41 in Township 56, Range 98, through which Bitter Creek flows. The other defendants are owners of separate portions of Section 36 or Lot 3

in Township 56, Range 99, through the south half of which Bitter Creek also flows. This section was purchased from the State of Wyoming in 1910. Eighty acres of it belonging to defendant Charles Grant Caldwell is and since 1911 has been irrigated with water taken from Bitter Creek through Caldwell Ditches No. 1 and No. 2 by virtue of appropriation permits from the State of Wyoming, dated October 6, 1910. Approximately all of the remainder of this section is irrigated with water from the same source taken through enlargements of said ditches by virtue of permits from the State of Wyoming dated April 22, 1915. Defendant Charles Grant Caldwell also owns a homestead of 80 acres, consisting of the East Half of the Southwest Quarter ($E\frac{1}{2} SE\frac{1}{4}$) of Section 38, Township 59, Range 99, through which Bitter Creek flows and which is irrigated with water purchased from the Government Reclamation Project.

Pursuant to the drainage plans of plaintiff as above stated it was found necessary to deepen Bitter Creek and in doing so plaintiff committed the trespass and caused the injuries which defendants claim they have suffered. The homesteads of Ide and Caldwell were patented under the Act of June 17, 1902 (Rec. Act, 32 Stat. 388), and the Act of August 30, 1890 (26 Stat. 391). The last named Act contains the following proviso:

"That in all patents for lands hereafter taken up under any of the land laws of the United States or on entries or claims validated by this act west of the one hundredth meridian, it shall be expressed that there is reserved from the lands in said patent described, a right of way thereon for ditches or canals constructed by the authority of the United States."

The act of the Legislature of Wyoming approved February 21, 1905, C. S. Wyo. 1910, Sec. 3890, provides:

"There is hereby granted over all the lands now owned by the State of Wyoming, which may hereafter be owned by the State of Wyoming a right of way for ditches, tunnels, telephone and transmission lines constructed by and under the authority of the United States; Provided, * * * that all conveyances by the State of any of its lands, which may hereafter be made, shall contain a reservation for rights of way provided for in this act."

The homestead patents to Ide and Caldwell contained this reservation:

"But excepting, nevertheless, and reserving unto the United States, rights of way over, across, and through said lands for canals and ditches constructed, or to be constructed by its authority, all in the manner prescribed and directed by the Act of Congress approved August 30, 1890, (26 Stat. 391)."

The patents of the State of Wyoming conveying Sec. 36 supra, contained this exception:

"Subject to all legally established or granted rights of way under the laws of the State of Wyoming or reserved to the United States."

The length of the irrigation season in the locality in question is 180 days, extending from April 20th to October 20th. In regard to whether or not the depression in the earth's surface, called in the record Bitter Creek wash, dry wash, drainage line, and Bitter Creek, is a natural stream, there was much testimony introduced by both parties. Such testimony has been carefully read and considered and we are of the opinion that giving to the testimony of the defendants' witnesses all that can be claimed for it, the following facts are established without material dispute. What is called Bitter Creek, when viewed separate and apart from the waters which are now flowing in it, from the Reclamation Project of the plaintiff, has no natural source of water supply other than rainfall or melting snow. The water from the territory which drains into Bitter Creek from rain and melting snow does so during the months of March and April of each year, and that subsequently to the first of May, no water is found in Bitter Creek other than produced by the Shoshone Project. The water from rain and melting snow varies from year to year proportionately to the amount of rainfall including snow. The official records of this rainfall including snow kept by the agents and officers of the plaintiff at Powell in the vicinity of the water shed to Bitter Creek shows that the rainfall including snow averages less than 6 inches per year. The same records show for the water shed, an evaporation of 30 inches during the irrigation season. The drainage basin contains only 33 square miles. Prior to the construction of the Shoshone Project although there were settlers in the vicinity of Bitter Creek near the town of Byron, as early as 1900, there is no evidence that anyone ever applied during that time to the State of Wyoming for a water permit on Bitter Creek although land along the so-called Creek is admittedly, according to all the testimony, worthless without water but with water is worth \$250 per acre. The water rights under which defendants or some of them claim were granted in 1910 or subsequent thereto. From 1900 until 1908, there was no grass, bushes, or trees such as grow along natural streams in Wyoming, growing along the banks of this alleged creek above Garland. All the engineers engaged on the Reclamation Project testified that from their own observation there was no natural flow or source of water in Bitter Creek except from rainfall or melting snow and that this was of short duration. Byron Sessions, a witness for the plaintiff, testified: "When you talk about water in that draw, it is all nonsense." The witness Caldwell whom the trial court mentions, was directly interested as a party defendant and his testimony does not conflict with what we have stated.

CARLAND, Circuit Judge, delivered the opinion of the Court, after stating the facts as above.

The attempt of the plaintiff to deepen, what is called in the evidence, Bitter Creek, in accordance with its plans for draining the

Garland Division of its Shoshone Project together with the attempts of the defendants to make worthless lands, worth \$250 per acre at the expense of the plaintiff are the chief causes of this litigation. The Reclamation Act provides that all proceedings thereunder on the part of the plaintiff shall be in accordance with the laws of the State in which the proceedings are had, and so far as we have been able to learn from the record, the plaintiff has complied with the laws of Wyoming in the construction of its Reclamation Project, including reservoirs, diversion dams, canals, and laterals. We are of the opinion that in the consideration of a case such as the one before us, a broad view of the situation is necessary, in order to carry out, if lawfully permissible, the great object which the plaintiff had in view in enacting legislation which permits it, with its great resources, to reclaim arid and semi-arid lands for cultivation. It is a work that could not be done or at least would not be done by private effort. On the face of the record it would seem that the defendants whose lands have been increased in value from nothing to \$250 per acre by the construction of the Shoshone Project were willing to receive this benefit without contributing anything therefor. They claim, however that they are acting clearly within their legal rights. If so they must prevail as against the claims of the plaintiff. There are two large questions to be considered in the determination of the rights of the parties. 1. Is or was Bitter Creek ever a natural stream within the meaning of those words as used in Art. 8, Sec. 1, Constitution of Wyoming which reads: "The water of all natural streams, springs, lakes or other collections of still water within the boundaries of the State are hereby declared to be the property of the State." 2. Had the United States a right of way through or across the lands of defendants to construct a ditch as a part of its drainage system in the Garland division of its Shoshone Project for the purpose of draining seeped lands, collecting waste and percolating water arising from its project, and diverting the same for beneficial use in connection with its Reclamation Project. Upon the first proposition we are of the opinion that the evidence falls far short of showing Bitter Creek ever to have been a natural stream. No one prior to the time that water first commenced to run in the Creek as the result of the construction of the Shoshone Project ever applied for a permit to use any of the water of the Creek, and there is no substantial conflict in the testimony to the effect that there was no water in the Creek after the first of May, and that the irrigation season did not commence until April 20th of each year. The substance of what the evidence shows has been set forth in the statement of facts, and we are of the opinion that it would be a clear mistake in considering the evidence to hold that Bitter Creek is or ever was a natural stream. The trial court found that it was a natural stream. We think the presumption attending such finding is clearly overthrown by the evidence and we must hold that there was a serious mistake made in the consideration of the evidence by the trial court upon this point. We have examined the authorities cited by counsel for defendants upon the question at issue and we are unable to find an authority which

under the facts as they appear in the record holds such a stream as Bitter Creek is shown to be is a natural stream. It is claimed that the question of whether Bitter Creek is a stream or not must be judged with reference to the country or locality in which it is found and that there are natural streams in arid countries that would not be called such in a country not arid. But certainly any such distinction should not be carried so far as to make a natural stream out of a dry run or wash. In determining whether a natural stream exists or not, it is permissible to inquire whether the alleged stream flows for such a length of time that its existence will furnish the advantages usually attendant on streams of water. *Chicago Etc. R. Co. v. Groves*, 20 Okla. 101; *Simons v. Winters*, 21 Oreg. 35. The stream in question when subjected to this test wholly fails. It certainly was worthless as a stream from which adjacent lands could be irrigated. It is believed that no definition of a natural stream or water course can be given that will apply to all cases, as each case has its own facts which must influence the judgment of the court. Speaking generally it seems to be the law that a natural stream must have a channel, boundary, permanent source of supply, and a permanent flow. *R. C. L. Vol. 27*, pps. 1063, 1065, 1066; 40 Cyc. 554, 555, 556; 29 Cyc. 283; *Buckley v. Wilcox*, 86 N. Y. 140; 40 Am. Rep. 519; *Pyle v. Richards*, 17 Neb. 180; 22 N. W. 370; 27 Am. & Eng. Encl. of Law 1; *Sanquinetti v. Pock*, (Cal.) 69 Pac. 98; *Hutchinson v. Watson Slough Ditch Co.* (Ida.) 101 Pac. 1095; *Rait v. Furrow*, (Kan.) 85 Pac. 934; *Thorpe et ux. v. City of Spokane*, 139 Pac. 221; *C., R. I. & P. v. Morton*, 157 Pac. 917; *Town of Jefferson v. Hicks*, 102 Pac. 79; *Gibbs v. Williams*, 25 Kansas 214; *Swett v. Cutts*, 50 N. H. 439; *Ashly v. Wolcott*, 11 Cush. 192; *Hoyt v. City of Hudson*, 27 Wis. 664; *Ang. Water Courses*, (5th Ed.) Sec. 4; *Bornes v. Sabron*, 10 Nev. 218; 1 *Kinney on Irrigation*, 2nd Ed. p. 495-6, 498-9.

We find nothing to the contrary in *Simons v. Winters*, 21 Oreg. 35, *Lindbloom v. Round Valley Water Co.*, 173 Pac. 994; *Oregon-Washington R. & Nav. Co. v. Royer*, 225 Fed. 881, because the facts in those cases are different from those in the case at bar. We therefore decide that Bitter Creek is not a natural stream. The State of Wyoming could not make the Creek a natural stream by issuing a permit to take water therefrom. *Farm Investment Co. v. Carpenter*, 61 Pac. 258-269; *Ryan v. Tutty*, 78 Pac. 661; *U. S. Ramahorn Ditch Co.*, 254 Fed. 842, 269 Fed. 80; *Wattson v. U. S.*, 260 Fed. 506; *Hagerman Irr. Dist. v. East Grand Plains Drainage Dist.*, 187 Pac. 555; *Vanderwork v. Hewes*, 15 N. Mex. 439; 110 Pac. 567; *Basinger v. Taylor*, 164 Pac. 522.

Coming now to the question as to whether the plaintiff had a right of way over and through the lands of defendants for the purpose of constructing a ditch in order to carry out its drainage plan and the collection and diversion of its waste, seepage and percolating water escaping from its Shoshone Project, we are of the opinion that the reservations in the patents from the United States and in the conveyances executed by the State of Wyoming to the defendants for lands in Sec. 36, *supra*, were valid reservations of a

right of way for the purpose mentioned and that the plaintiff was not a trespasser in entering upon defendants' lands for the purpose of deepening Bitter Creek. The Act of Congress of August 30, 1890, and the Act of the Legislature of Wyoming approved February 21, 1905, so far as material are set forth in the statement of facts. Also the reservations in the patents and deeds of conveyance. We are satisfied that the legislation on the part of Congress and the State of Wyoming was enacted in order to assist the plaintiff in carrying out the Reclamation Act, although the latter Act was passed after August 30, 1890. The Legislatures of other States having arid lands passed acts similar to the one passed by the State of Wyoming. Such statutes were enacted in 1905 in Idaho, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and in 1907 by California, New Mexico, and South Dakota, and in 1909 by Colorado. Counsel for defendant calls attention to the fact that the Act of Congress of August 30, 1890, *supra*, reserves a right of way for ditches, and canals "constructed" by the authority of the United States, while the reservation in the homestead patents contains the additional words "or to be constructed," and the claim is made that the reservations in the patents are broader than the statute and that no authority can be found in the statute for reserving a right of way for canals and ditches "to be constructed" by authority of the United States. Such a construction of the statute would make the reservation therein apply only to ditches that had already been constructed. We do not think that such an absurd result was ever intended by Congress, but that the reservations in the patents were in accordance with the evident intention of Congress and that such interpretation being given by the Department of the government having charge of the execution of the statute, great weight must be given to it. We think the statute as well as the patents referred to ditches "to be constructed" in the future. The statute in question has been construed by the courts in the following cases: *Green v. Willhite*, 160 Fed. 755, (Idaho 1906); *Green v. Willhite*, 14 Ida. 238, 93 Pac. 971, (Idaho 1908); *U. S. v. Van Horne*, 197 Fed. 611, (Colo. 1912). In those cases the courts have placed the same construction upon the statute as we have indicated. In *Green v. Willhite*, 14 Ida. 238, a detailed history of the Act and the discussions in Congress relative to its purpose and interpretation are given. It appears clearly from said history as stated by the Supreme Court of Idaho that the members of Congress, both those favoring and those opposing the act, believed and understood that it would have the effect of reserving a perpetual easement and right of way to the government for ditches and canals that might thereafter be constructed by authority of the government over lands that should be entered and patented subsequent to the passage of the act. We have no doubt that the reservation in the homestead patents contained the proper interpretation of the Act of Congress of August 30, 1890. It is further contended by counsel for defendants that there is no justification in the language of the statute enacted by the Legislature of Wyoming for the purpose of reserving a right of way for ditches, tunnels, telephone and transmission lines constructed by and under the authority of the United States for ex-

tending said right of easement to lands not owned by the State. We do not think it is open to the defendants who purchased their lands from the State of Wyoming and received and accepted the deed of conveyance containing the reservation heretofore mentioned, to now complain as against the plaintiff that the reservation is void. The reservation and the deed of conveyance was made pursuant to the last proviso of Sec. 4954 W. C. S. 1920, heretofore quoted, and became operative at the time the deed was executed and delivered. The defendants took their title subject to this burden and with full knowledge thereof. No injustice results for the reason that the lands purchased by defendants were admittedly worthless without irrigation and they were not purchased until the plaintiff had proceeded far enough with its Shoshone Project so as to show that these lands would be irrigated thereunder. Counsel for defendant complains of the great injustice done the defendants by the manner in which Bitter Creek was deepened across defendants' lands. We have no intention of deciding that the plaintiff could go on the lands of defendants and in a reckless and careless way construct a ditch that would unnecessarily damage the lands of defendants, and the decision in this case will be without prejudice to the right of the defendants or any of them to recover from the plaintiff any damages resulting from the want of ordinary care in constructing the ditch or the deepening of Bitter Creek. We think the plaintiff was fully authorized by the statutes that have been mentioned and the reservations in the patents and deeds of conveyance to construct a ditch across defendants' lands using ordinary care. It is well settled that the plaintiff may construct drainage works as a part of its irrigation system. *Bissett v. Pioneer Irr. Dist.*, 120 Pac. 461; *Pioneer Irr. Dist. v. Stone*, 130 Pac. 382; *Nampa & Meridian Dist. v. Petra*, 153 Pac. 425; *G. G. Burt et al. Drainage Dist. v. Farmer's Co-operative Co.*, 168 Pac. 1078. The necessity for drainage and the methods of conducting the work are, in our opinion, in the sound discretion of the Secretary of the Interior and such discretion cannot be reviewed by the courts. *Moss v. Fisher*, 223 U. S. 691; *Knight v. U. S. Land Association*, 142 U. S. 161; *Noble v. Union River Logging Co.*, 147 U. S. 165, (1893); *U. S. v. Minidoka & W. R. Co.*, 190 Fed. 491, (1911); *Stalker v. O. S. L. Ry. Co.*, 225 U. S. 142, (1912); *U. S. v. O'Neill*, 198 Fed. 680, (Colo.); *U. S. v. Burley*, 172 Fed. 617; *State ex rel. Megler v. Forrest, Commissioner of Public Lands*, (Washington, 1895), 43 Pac. 51; *U. S. v. Doherty*, 27 Fed. 730; *U. S. v. Schurs*, 102 U. S. 375; *Cosmos Exploration Co. v. Gray Eagle Co.*, 190 U. S. 301; *Riverside Oil Co. v. Hitchcock*, 190 U. S. 317; *U. S. v. Speed*, 8 Wall. 77, 83; *Earnshaw v. U. S.*, 146 U. S. 60; *Bates v. Payne*, 187 U. S. 107.

The right of the plaintiff to save and continue to use the drainage, seepage and waste waters of its project is established by the following cases. *Ramshorn Ditch Co. v. U. S.*, 269 Fed. 80, 83, (C. C. A. 8th Cir. 1920); *Griffiths v. Cole*, 264 Fed. 369, 372, (U. S. D. Ct. Idaho, 1919); *McKelvey v. North Sterling Irr. Dist.*, 179 Pac. 872, 874, (Colo. 1919); *Hagerman Irr. Co. v. East Grand Plains Drainage Dist.*, 187 Pac. 555, 557, 558, (N. Mex. 1920), *Lambeye v. Garcia*,

157 Pac. 977, 979, 980, (Ariz. 1916); *United States, plaintiff v. Oliver O. Haga et ux.*, defendant, U. S. District Court, District of Idaho, August 10, 1921.

The permits granted by the State of Wyoming to the defendants could not authorize the defendants to take the waters of the plaintiff and as Bitter Creek was not a natural stream said permits gave no authority to take water from Bitter Creek. No one ever applied for such permits until the plaintiff had at great expense brought water from the Shoshone reservoir to the vicinity of the lands in question and it is fair to presume that no permits would have been asked for if the irrigation project had not been developed by the plaintiff. The law is clear in our opinion that the plaintiff had the right to save and continue to use the drainage, seepage and waste waters of its project as long as such water could be identified and had not been abandoned. So far as abandonment is concerned it was neither pleaded or proven by the defendants. There may have been some of the plaintiff's water which during the construction of the Shoshone Project may have flowed into the Shoshone River but the acts and declarations of the plaintiff show that as soon as it could be reasonably do so it commenced to construct ditches and diversion works to save and divert drainage, seepage and waste water arising from its project for the purpose of applying it to the beneficial use of irrigating lands in the Garland division. The evidence shows that at all times plaintiff had in mind the saving of its waste water. Even if it had been shown that the plaintiff had abandoned some of this waste water, it would not preclude it from subsequently attempting to save it for beneficial use where the rights of third parties had not intervened, and the defendants are no such parties as they have no lawful right to take water from Bitter Creek, except under the terms of the Reclamation Act. In *U. S. v. Haga, supra*, Dietrich, District Judge, used the following language in regard to the question now under consideration.

"In point of law the general principle upon which the plaintiff relies is scarcely open to controversy; one who by the expenditure of money and labor diverts appropriable water from a stream and thus makes it available for fruitful purposes is entitled to its exclusive control so long as he is able and willing to apply it to beneficial uses, and such right extends to what is commonly known as wastage from surface run-off and deep percolation, necessarily incident to practical irrigation. Considerations of both public policy and natural justice strongly support such a rule. Nor is it essential to his control that the appropriator maintain continuous actual possession of the water. So long as he does not abandon it or forfeit it by failure to use, he may assert his right. It is not necessary that he confine it upon his own land or convey it in an artificial conduit. It is requisite, of course, that he be able to identify it, but subject to that limitation, he may conduct it through natural channels and may even commingle it or suffer it to commingle with other waters. In short, the rights of an appropriator in these respects are not affected by the fact that the water has once been used. *U. S. v.*

Ramshorn Ditch Co., 254 Fed. 842, 269 Fed. 80; McKelvey v. North Sterling Irr. Dist., (Colo.), 179 Pac. 872; Lambeye v. Garcia (Ariz.), 157 Pac. 977; Hagerman Irr. Co. v. East Grand Plains D. D. (N. Mex.), 187 Pac. 555; Griffiths v. Cole et al., 24 Fed. 369; Twin Falls Canal Co. v. Damman (This court No. 689, decision August 20, 1920.)"

"An application of the general rule discussed, to the undisputed facts, leaves no room for doubt of the right of the plaintiff to follow the wastage from this storage water so far as it can be identified. Clearly, it has never intended to relinquish such right, nor is there any ground upon which to rest a finding of forfeiture. The reservoir was not completed and put into service until 1915 and at that time the plaintiff's distributing system was so constructed and it had done such work on the channel of the creek as to enable it to pick the water up and send it on for use on Project lands in the Nampa & Meridian Irrigation District. In any possible view of the law defendant's interference was not so continuous or of such character as to confer upon him any right to such water or to divest the plaintiff of any right; nor as to this water is there any substance in fact to the defense of estoppel."

We conclude that the facts as stated and the law applicable thereto require a reversal of the decree below and that the case be remanded to that court with directions to enter a decree in favor of the plaintiff as prayed.

And it is so Ordered.

Filed December 7, 1921.

(Decree.)

United States Circuit Court of Appeals, Eighth Circuit, December Term, 1921.

Wednesday, December 7, 1921.

No. 5704.

UNITED STATES OF AMERICA, Appellant,

vs.

ARTHUR W. IDE, CHARLES GRANT CALDWELL, H. B. LOOMIS, Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E. Townsley, and Agnes H. Caldwell.

Appeal from the District Court of the United States for the District of Wyoming.

This cause came on to be heard on the transcript of the record from the District Court of the United States for the District of Wyoming, and was argued by counsel.

On consideration whereof, it is now here ordered, adjudged and decreed by this Court, that the decree of the said District Court, in this cause, be, and the same is hereby, reversed without costs to either party in this Court.

It is further ordered that this cause be, and the same is hereby, remanded to the said District Court with directions to enter a decree in favor of the plaintiff, appellant in this Court, as prayed.

December 7, 1921.

(Petition for and Order Allowing Appeal to Supreme Court U. S.)

Come now the appellees in the above entitled cause and complain that in the record and proceedings and in the rendition of the decree of said United States Circuit Court of Appeals for the Eighth Circuit sitting at the City of St. Louis in the State of Missouri in said cause on the 7th day of December, A. D. 1921, reversing the decree of the United States District Court for the District of Wyoming heretofore entered in said cause on the 31st day of March, A. D. 1920, manifest error has been committed to the great damage of said petitioners and said petitioners feel themselves greatly aggrieved by the decree rendered and entered by said court in the above entitled cause on said 7th day of December, A. D. 1921, and said appellees do hereby appeal from said decree to the Supreme Court of the United States for the reasons set forth in the Assignment of Errors filed herewith.

Said appellees respectfully allege that the matter involved herein exceeds in value and amount the sum of \$1,000 besides the costs of said cause and said cause is not one in which the jurisdiction of the Circuit Court of Appeals is made final.

Wherefore, said appellees pray that their appeal be allowed and that citation be issued as provided by law and that a transcript of the record, proceedings and documents upon which said decree was based, duly authenticated, be sent to the Supreme Court of the United States sitting at Washington in the District of Columbia, under the rules of such court in such cases made and provided.

And your petitioners further pray that the proper order fixing the required security to be given by them be made and entered.

AVERY HAGGARD,
WILLIAM B. ROSS,
Solicitors for Appellees.

Appeal allowed upon giving bond as required by law in the sum of \$500.

March 6, 1922.

WALTER H. SANBORN,
Judge.

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Mar. 6, 1922.

(Assignment of Errors on Appeal to Supreme Court U. S.)

Come now the appellees in the above entitled cause and file the following assignment of errors upon which they will rely upon their prosecution of the appeal in the above entitled cause from the decree made by said court on the 7th day of December, A. D. 1921, to-wit:

I.

The said United States Circuit Court of Appeals for the Eighth Circuit erred in making and entering the order reversing the decree entered in said case by the United States District Court of the District of Wyoming.

II.

The United States Circuit Court of Appeals for the Eighth Circuit erred in directing the United States District Court of the District of Wyoming to enter a decree in said case in favor of the above named appellant and against these appellees.

III.

The United States Circuit Court of Appeals for the Eighth Circuit erred in finding and decreeing that said appellant is entitled to reclaim water which it has sold and for which it has received compensation after such water has been used for irrigation purposes by the purchasers thereof.

IV.

The United States Circuit Court of Appeals for the Eighth Circuit erred in finding and decreeing that Bitter Creek is not a natural stream within the meaning of the Constitution and laws of the State of Wyoming.

V.

The United States Circuit Court of Appeals for the Eighth Circuit erred in finding and decreeing that said appellees are not entitled to acquire rights to use the waters from said Bitter Creek under the provisions of the Constitution and laws of the State of Wyoming.

VI.

The United States Circuit Court of Appeals for the Eighth Circuit erred in finding and decreeing that said appellant has a right-of-way over and across the lands of said appellees under and by virtue of the provisions of the laws of the State of Wyoming and of the United States giving rights-of-way for irrigation and drainage canals and ditches.

Wherefore, said appellees in this court, who are to be the appellants in said Supreme Court of the United States, pray that

said decree of the United States Circuit Court of Appeals for the Eighth Circuit be reversed and that the decree of the United States District Court for the District of Wyoming be restored and affirmed.

AVERY HAGGARD,
WILLIAM B. ROSS,
Attorneys for said Appellees.

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Mar. 6, 1922.

(Bond on Appeal to Supreme Court U. S.)

Know all men by these presents, That, we, Arthur W. Ide, Charles Grant Caldwell, Harrison B. Loomis, Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E. Townsley and Agnes H. Caldwell, as principals, and United States Fidelity & Guaranty Company, a corporation organized and existing under and by virtue of the laws of the State of Maryland and duly authorized to do business in the State of Wyoming, as surety, are held and firmly bound unto the United States of America in the sum of \$500.00, lawful money of the United States, to be paid to said United States of America; to which payment, well and truly to be made, we bind ourselves, and each of us, jointly and severally, and each of our heirs, executors, administrators and successors firmly by these presents.

Sealed with our seals and dated this 3d day of March, A. D. 1922.

Whereas, the above named, Arthur W. Ide, Charles Grant Caldwell, Harrison B. Loomis, Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E. Townsley and Agnes H. Caldwell, have prosecuted an appeal to the Supreme Court of the United States to reverse the judgment of the United States Circuit Court of Appeals for the Eighth Circuit, in the above entitled cause:

Now, therefore, the condition of this obligation is such that if the above named, Arthur W. Ide, Charles Grant Caldwell, Harrison B. Loomis, Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E. Townsley and Agnes H. Caldwell, shall prosecute their said appeal to effect and answer all costs if they fail to make good their plea, then this obligation shall be void; otherwise to remain in full force and effect.

ARTHUR W. IDE,	[SEAL.]
CHARLES GRANT CALDWELL,	[SEAL.]
HARRISON B. LOOMIS,	[SEAL.]
CHRISTOPHER ALTHOFF,	[SEAL.]
ARTHUR R. THORNBURG,	[SEAL.]
EARL KYSAR,	[SEAL.]
D. E. TOWNSLEY,	[SEAL.]
AGNES H. CALDWELL,	[SEAL.]

Principals,

By AVERY HAGGARD,
WILLIAM B. ROSS,

Their Attorneys.

Attest:

AVERY HAGGARD.

[SEAL.]

UNITED STATES FIDELITY AND GUAR-
ANTY CO. OF BALTIMORE, MD.,

By W. C. BOND,

Its Attorney in Fact,

Surety.

The foregoing bond is approved this 6th day of March, A. D. 1922.

WALTER H. SANBORN,

Senior U. S. Circuit Judge

for the Eighth Circuit.

(Certified copy of Power of Attorney of the United States Fidelity and Guaranty Company to W. C. Bond attached to original bond.)

(Endorsed:) Filed in U. S. Circuit Court of Appeals, Mar. 6, 1922.

UNITED STATES OF AMERICA:

To United States of America, Greeting:

You are hereby cited and admonished to be and appear at a Supreme Court of the United States, at Washington, D. C., within sixty days from and after the date hereof, pursuant to an appeal allowed and filed in the Clerk's office of the United States Circuit Court of Appeals for the Eighth Circuit, wherein Arthur W. Ide, Charles Grant Caldwell, H. B. Loomis, Christopher Althoff, Arthur R. Thornburg, Earl Kysar, D. E. Townsley and Agnes H. Caldwell are appellants and you are appellee, to show cause, if any there be, why the decree rendered against the said appellants as in said appeal mentioned should not be corrected and why speedy justice should not be done to the parties in that behalf.

Witness, the Honorable Walter H. Sanborn, Senior United States Circuit Judge in and for the Eighth Circuit, this sixth day of March, A. D. 1922.

WALTER H. SANBORN,

Senior United States Circuit Judge

for the Eighth Circuit.

Service of above and foregoing citation is hereby accepted and receipt of copy of the same is hereby acknowledged this fourteenth day of March, A. D. 1922.

ALBERT D. WALTON,

United States Attorney

for the District of Wyoming.

[Endorsed:] U. S. Circuit Court of Appeals, Eighth Circuit. No. 5704. United States of America, Appellant, vs. Arthur W. Ide, et al. Citation on appeal to Supreme Court, U. S., and acceptance of service. Filed Mar. 18 1922. E. E. Koch, Clerk.

(Clerk's Certificate.)

United States Circuit Court of Appeals, Eighth Circuit.

I, E. E. Koch, Clerk of the United States Circuit Court of Appeals for the Eighth Circuit, do hereby certify that the foregoing contains the transcript of the record from the District Court of the United States for the District of Wyoming, as prepared and printed, pursuant to the stipulation of the parties, under the rules of the United States Circuit Court of Appeals for the Eighth Circuit, under the supervision of its Clerk, and full, true and complete copies of all the pleadings, record entries and proceedings, including the opinion, had and filed in the United States Circuit Court of Appeals, except the full captions, titles and endorsements omitted in pursuance of the rules of the Supreme Court of the United States, in a certain cause in said Circuit Court of Appeals, wherein the United States of America was Appellant and Arthur W. Ide, et al., were Appellees, No. 5704, as full, true and complete as the originals of the same remain on file and of record in my office.

I do further certify that on the seventh day of February, A. D. 1922, a mandate was issued out of said Circuit Court of Appeals, directed to the Judges of the District Court of the United States for the District of Wyoming.

I do further certify that the original citation with acceptance of service endorsed thereon is hereto attached and herewith returned.

In Testimony Whereof, I hereunto subscribe my name and affix the seal of the United States Circuit Court of Appeals for the Eighth Circuit, at office in the City of St. Louis, Missouri, this twenty-third day of March, A. D. 1922.

[Seal of the United States Circuit Court of Appeals,
Eighth Circuit.]

E. E. KOCH,
*Clerk of the United States Circuit Court
of Appeals for the Eighth Circuit.*

Endorsed on cover: File No. 28,835. U. S. Circuit Court Appeals, 8th Circuit. Term No. 334. Arthur W. Ide, Charles Grant Caldwell, H. B. Loomis et al., Appellants, vs. The United States of America. Filed April 15th, 1922. File No. 28,835.